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EVOLUTION OR REVOLUTION?
The Transformation of Law

There are a handful of books and poems that have surprised me with their impact on my life. I assume we all have them—whether because of their beautiful prose or because they spoke to us at a particular time in our lives. However, there are also books that surprise me because I never would have read them without some outside reason—such as a class assignment or the peer pressure of a book club—and yet they have provided an intellectual construct throughout my life.

As a first-year undergraduate student, one of my professors assigned The Structure of Scientific Revolutions by Thomas S. Kuhn. Kuhn was a physicist and a philosopher who wrote about the nature and process of scientific advancement. When his book was first published in 1962, scientific thought was widely accepted as being a gradual progression of discoveries and advancements that proceeded in a linear fashion—an evolution of knowledge. Kuhn's philosophy was controversial: He proposed the idea that scientific knowledge sometimes shifted dramatically, in a non-linear fashion, changing the entire way we think about something. You may not have heard of Thomas Kuhn or his book, but you are likely very familiar with part of his theory: Kuhn was the first to use the phrase “paradigm shift,” which entered the vernacular and is probably greatly overused.

I, like many others, have been thinking a lot about changes in the legal marketplace and in the delivery of legal services, and what that means for legal education and access to justice issues. All this thinking about change led me back, again, to Thomas Kuhn. Are we seeing a Kuhnian revolution in the legal industry, or is this simply an evolution of what has come before? Does blockchain technology or artificial intelligence (AI) represent a true paradigm shift? When I think about the changes in research and libraries since my first law librarian job, the degree of change is amazing. However, that change does seem to be part of a gradual (albeit fast-paced) and continuous process. Are we now at our revolution?

This issue of AALL Spectrum gathers articles on the transformation of law. Debbie Ginsberg explains blockchain (the latest tech buzzword), and proposes using its power to authenticate primary sources. Ed Walters discusses various ways that we can utilize AI tools in our work. As the ways in which we perform legal research become more technologically complicated and less transparent, Susan Nevelow Mart reminds us that we need to understand how our tools (in this case, search algorithms) work. These, and other articles, provide insight into how recent changes in technology and workflow impact our lives. Are these changes evolutionary, or are we in the midst of a legal revolution?
TRANSFORMING CUSTOMER
SERVICE IN THE POST-DIGITAL
LAW LIBRARY
Delighting your customers in the era of
Alexa, Siri, augmented reality, artificial
intelligence, and yes, even drones.
BY DAN ODENWALD

READ/WRITE: ARTIFICIAL
INTELLIGENCE LIBRARIES
How information professionals can put
AI tools into practice.
BY ED WALTERS

NEW ATTITUDE: ADAPTING TO THE
CHANGING LEGAL LANDSCAPE
Lessons from the Marshmallow Test:
why librarians and legal professionals
must adapt to disruptive innovation.
BY PATRICIA A. SMITH

LEGAL WORKPLACES OF
THE FUTURE
Why designing successful spaces
means balancing business and culture.
BY STEVEN J. MARTIN
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The timing of my first President’s Message for AALL Spectrum couldn’t be better. I’m back in my office after a very successful AALL Annual Meeting, and I feel like I could take on the world. What an amazing conference! It was filled with relevant educational programming, thought leadership, updates on the latest industry products, and great interactions with peers.

Bryan Stevenson’s keynote address was powerful and left everyone in the room inspired to get proximate, change the narrative, stay hopeful, and make a conscious decision to do uncomfortable things. I am ready to accept that challenge and take on the theme of next year’s conference: “From Knowledge to Action.”

For those who do not know law librarians and legal information professionals, the talents we bring to our individual organizations may come as a surprise. They know we are intelligent and passionate about information, and that we are generous with our time and knowledge. What tends to shock our peers within the legal community is how progressive we are when it comes to technology, process improvements, and testing cutting-edge ideas within the legal profession. Robert Ambrogi, author of the LawSites blog, left the meeting so impressed with our members’ tech skills and savvy that he called the conference “one of the leading legal technology conferences.” Although being a trailblazer in technology isn’t a new concept for most of us, it still surprises those who may not know the range of talent we have in the law library profession.

Look no further than the pages of the very magazine you are holding in your hand or viewing on your screen at this moment. Articles on search algorithms, blockchain technology, artificial intelligence, augmented reality, and emotional intelligence are not being written by those in Information Technology departments, but rather by those in the library, information services, knowledge management, or whatever you call your individual department. Technology and information have always gone hand in hand and law librarians have led the charge in adapting the latest technology and applying it to legal information.

AALL is also breaking down barriers when it comes to women in technology. At the inaugural Innovation Tournament, the top two prizes went to tech leaders who happened to be women. That is not an unusual occurrence in the law library world. When you give people enough freedom, resources, and support, they will produce innovative results. Diversity, in all its forms, enhances how we capture and share legal information and solve problems—we all benefit from being exposed to it.

Exposure requires breaking down the silos that we place around ourselves. I hope that you are able to learn from the insights and ideas shared within these pages, and that you put that knowledge into action.

Greg Lambert
AALL President
glambert@jw.com
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TRENDING AI IN LEGAL

Interested in learning more about artificial intelligence in the legal industry? AALL member Marlene Gebauer shares highlights from her 2017 AALL Annual Meeting program, “Deep Dive: How Artificial Intelligence Will Transform the Delivery of Legal Services.”

Common AI Questions for Librarians
- How can we gather info/data and come to know something?
- How can we create processes that build upon that info/data to accomplish our goals?
- How can we synthesize info/data to predict, strategize, judge, and advise?
- Where does the info/data come from?

AI’s Role in the Lawyers’ Tool Kit
- Changing how law firms deliver client services.
- Lowering costs, while reducing time spent on repeatable work.
- Shifting time toward solving problems through improved efficiency, process, knowledge management, and succession planning.

WHAT’S HOT

TYPES OF COGNITIVE TECHNOLOGIES
- Automated planning and scheduling
- Computer vision and speech recognition
- Machine learning
- Natural language processing
- Optimization
- Rules-based systems

COGNITIVE TECHNOLOGY USES
- Contract analysis/due diligence
- Electronic discovery
- Expertise automation
- Legal research
- Prediction/risk assessment/outcomes

TOOLS IN USE
- Bloomberg Corporate Standards
- CARA
- eBrevia
- IBM Watson
- Kira
- KMStandards
- Lex Machina
- LexPredict
- Neota Logic
- PREMONITION
- Ravel
- RAVN

AI Predictions for Librarians
- Librarians will continue to be attitudinal leaders
- Librarians will continue to be technological leaders
- Librarians will increasingly play the role of management consultants
- Librarians will learn to speak even more languages

Content contributed by Marlene Gebauer; Director of Knowledge Solutions; Greenberg Traurig, LLP; Florham Park, NJ.
This program also featured Vishal Agnihotri (Hinshaw & Culbertson), Ivan London (Bryan Cave LLP), Kingsley Martin (KMStandards LLC), Ryan McClead (Neota Logic), and Jeff Ward (Duke Law School).
MEMBER PROFILE

VANTAGE POINT

TODD T. ITO
- Head of Instruction & Outreach
- Lecturer in Law
- University of Chicago
- D’Angelo Law Library
- Chicago, IL

IF YOU COULD HAVE ANY SUPERPOWER, WHAT WOULD IT BE?
I suppose it’s pretty lame when you consider all of the possible superpowers, but I would love to be able to dunk like Russell Westbrook.

ADVICE TO YOUR 20-YEAR-OLD SELF?
I was fairly idealistic, so I would probably tell 20-year-old Todd that thinking seriously about having a career doesn’t make you a sellout.

FAVORITE TRAVEL DESTINATION?
I like to visit different cities and also spend time surrounded by nature, so my favorite travel destinations allow me to do both. Recent trips to the San Francisco Bay area and to Ireland ticked both of those boxes quite well.

WORDS TO LIVE BY?
I try to live by the Golden Rule of “do unto others as you would have them do unto you,” but I find that a lot of people don’t have the same preferences I do, so it doesn’t always work out that well.

IF YOU COULD LIVE IN A BOOK OR MOVIE, WHAT WOULD IT BE?
I don’t know how long I would like to live there, but I find the world of the movie Pierrot le Fou to be beguiling and intoxicating. I would definitely like to visit for a little while.
AALL thanks its generous sponsors for helping to make the 2017 AALL Annual Meeting & Conference a success.

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AALL Executive Board Actions

The AALL Executive Board met July 13, just prior to the start of the AALL Annual Meeting & Conference. During the meeting, the Executive Board considered a number of agenda items and took the following actions:

- Approved the development and publication of a State of the Profession survey. Once published the study will be available to members and other interested parties or entities. An official call for volunteers to serve on an advisory group to assist with the development of the survey is forthcoming.
- Approved the operating budget for the 2017-2018 fiscal year, which begins on October 1. This year’s budget does not include funds for the audio recordings of the 2018 AALL Annual Meeting program sessions. This was based on a review of recording access statistics, which showed low utilization of the recordings. The budget also includes two new revenue streams: one from the State of the Profession survey and the other from new competitive intelligence programs.
- Approved a request from the Technical Services Special Interest Section (SIS) and the Online Bibliographic Services SIS to allow for the appointment of AALL Liaisons to committees of the American Library Association that deal with cataloging and MARC records. Funding for liaison expenses will be provided by the SISs.
- Declined a proposal from the Digitization & Educational Technology SIS to revise the AALL Annual Meeting program proposal selection process.
- Approved the report and recommendations from the Awards Review Special Committee. The report recommended the elimination of the following awards, beginning in the 2018-2019 Association year: Chapter Professional Development, Excellence in Marketing, and Law Library Publications. It also declined a request to assume responsibility for the Spirit of Librarianship for Public Service Award.
- Approved the report and recommendations from the Executive Board Administration Committee to revise the AALL Archives policy.
- Approved the report and recommendations from the George A. Strait Minority Scholarship Review Special Committee to create a George A. Strait Fellows program, in addition to the scholarship program.
- Declined a proposal from a member to expand the definition of minority for the purposes of the George A. Strait Minority Scholarship.
- Reviewed a status report from the Body of Knowledge Special Committee. The special committee will submit its final report and recommendations to the Executive Board in late August.
- Tabled the report and recommendations from the Innovation Incubator Special Committee.

The Executive Board book and related materials are available on AALLNET at bit.ly/AALLboard0717.
General Business Meeting Actions
The General Business Meeting was held July 17 during the 2017 AALL Annual Meeting & Conference in Austin. The meeting kicked off with reports from AALL President Ronald E. Wheeler Jr. and President-elect Greg Lambert. Both highlighted the Association’s progress in meeting the goals of the AALL strategic plan. Following the Association highlights, AALL Executive Board Treasurer Jean L. Willis presented her treasurer’s report to the membership regarding the financial statement for the 2016 fiscal year.

To view the entire report visit bit.ly/MJ17Treasurer.

Next, AALL Executive Board Secretary Katherine K. Coolidge introduced the newly elected Executive Board Members:
- Vice President/President-Elect Femi Cadmus
- Secretary Luis Acosta

2017-2018 CALENDAR

SEPTEMBER

05  2018 AALL Annual Meeting call for proposals issued
18  AALL Executive Board Election Candidates Forum for Board Members
25  AALL Executive Board Election Candidates Forum for President-Elect
29  AALL Executive Board election opens

OCTOBER

02  2018 AALL Annual Meeting call for proposals closes
18-20 Ohio Regional Association of Law Libraries Annual Chapter Meeting

NOVEMBER

01  AALL Executive Board election results announced

APRIL 2018

13-14 AALL Leadership Academy

JULY 2018

13  AALL Executive Board summer meeting
14-17 111th AALL Annual Meeting & Conference, Baltimore, MD

QUICK LINKS

AALL ANNUAL MEETING bit.ly/AALL2018
AALL EDUCATION bit.ly/AALLeducation
Certificates of Appreciation Awarded to Six Honorees
President Ronald E. Wheeler Jr. presented six certificates of appreciation to recognize exceptional contributions to the Association or to the profession. Honorees were:

- Catherine Dunn for her exemplary leadership of the Body Of Knowledge Development Special Committee.
- Julie Graves Krishnaswami for her leadership of the Awards Review Special Committee.
- Allen Moye for his dedicated leadership of the George A. Strait Minority Scholarship Review Special Committee.
- Kristina L. Niedringhaus for her profound leadership as AALL Spectrum Editorial Board Chair.
- Roger Skalbeck for his dedicated leadership of the National Conference on Copyright of State Legal Materials Special Committee.
- Beth Williams for her inspiring leadership of the Innovation Incubator Special Committee.

A full transcript from the meeting will be published in Volume 109, Number 4 of Law Library Journal.
What book do you recommend for staying abreast of changes in the legal information field?

**1. LOCATING U.S. GOVERNMENT INFORMATION HANDBOOK** by Edward Herman and Theodora Belniak (Hein, 3rd edition, November 30, 2015). “This print resource includes hundreds of URLs to government-related websites—an incidence of old technology meeting new technology. General information is provided about governmental structure and conducting online research, but the handbook is mainly a one-stop resource for finding government documents, both in print and online, with explanations of what the websites contain. It’s not so much the handbook, but rather the websites it sends users to that’s important. It’s in the shape-shifting of electronic data that changes to legal information are quickly made.”

Nick Sexton; Head of Access Services & Reference Librarian; UNC School of Law, Kathrine R. Everett Law Library; Chapel Hill, NC


Joel Fishman, Retired; Associate Director for Lawyer Services; Duquesne University; Allegheny County Law Library; Pittsburgh, PA

**3. INTERNATIONAL LAW LEGAL RESEARCH** by Anthony S. Winer, Mary Ann E. Archer, and Lyonette Louis-Jacques (Carolina Academic Press, October 1, 2013). “As the international legal community grows and becomes more interconnected, so too does international legal information in volume and complexity. This title helps both the novice and the initiated understand the types of international legal information available—from their authority, to their sources. It is not too elementary for sophisticated users, nor is it too advanced for the researcher wading into international law for the first time. What it does accomplish is being thorough, informative, and highly readable.”

Wanita Scroggs; International Law Librarian; Stetson University College of Law, Dolly & Homer Hand Law Library; Gulfport, FL

**4. LEGAL INFORMATION BUYER’S GUIDE & REFERENCE MANUAL** by Kendall Svengalis (New England LawPress, 2012). “After being forced to read parts of this book in library school, I realized how useful it was when I started my first job. It’s updated yearly, and has information about each state, new databases, secondary sources, and primary sources—pretty much anything to do with the legal field. It also has a great table of contents and index, so I can jump straight to the information I need!” (*A 2017 edition was released this summer.*)

Taryn Marks; Faculty Services & Reference Librarian; University of Florida, Levin College of Law, Lawton Chiles Legal Information Center; Gainesville, FL

**CONTRIBUTE** What book has had the most impact on your leadership and professional development? Send your pick to hhaemker@aall.org.
TRANSFORM CUSTOMER IN THE POST-DIGITAL LAW LIBRARY

BY DAN ODENWALD

Delighting your customers in the era of Alexa, Siri, augmented reality, artificial intelligence and, yes, even drones.
well-worn tradition among futurists within law librarianship is to deploy trillions of electrons examining the fate of the profession in the post-digital era. Countless observers—optimists and pessimists alike—opine on how to remain relevant, necessary, and indispensable in a world of ones and zeroes. We're told that forces such as ever-growing user self-service, increasingly powerful search algorithms, and machine learning threaten the profession's very survival. How do we adapt and thrive? What is our shining new path? Will we even recognize it when we see it?

The overwhelming answer to these questions is, in part, as obvious as it is inescapable. Continue to deliver value to stakeholders by doing what we do best—providing exceptional, remarkable, can't-live-without customer service. If that seems boring or trite, then we're missing the bigger picture. Our profession's fundamentals—by their very nature—still apply. Always have, always will. Indeed, some suggest they've obtained new currency in how we approach and think about our work, even as Siri and Alexa open shop on our block.

In 2017 and beyond, law librarianship continues to evolve, and the role customer service takes—and will take—in the post-digital era will look different, too. The outlines will be familiar enough, the language and conventions mostly the same, but as the sun fades on print, Web 1.0, and even Web 2.0, we must reconsider how to serve stakeholders in an emerging era powered by developments beyond our control.

Not too far from now, the days of email reference, virtual storefronts, and social media optimization will seem as dated as AOL, Friendster, and clamshell mobile phones. To be sure, customer service in the post-digital law library will rest on the same core principles as it does today, but it will change. We may be a long way from the day when artificial intelligence discerns legislative intent for us, or drones drop deskbooks at our doors, but we ought to contemplate that future and the critical role that customer service will continue to occupy in it.

With so much focus on the transformation of law, it seems fitting then to share some new rules of the road for law library customer service in the post-digital age. What undergirds the new rules will be familiar, but they aren't necessarily self-evident, and practitioners are already breaking some of them. So, throw on your (already obsolete) Google Glass, lean back in your driverless car, and ponder these new rules for delighting our customers.
Every interaction between the library and its customers could fall on a graph of one to 10. Was the interaction a 10?

1 Stop Selling Yesterday’s Fish. Post-digital era customer service begins with what it’s not. Next-generation legal research platforms, linked data and Watson long ago replaced the perfunctory, will-you-pull-a-statute-for-me duties of law librarians. New technological developments have even recreated the magic of serendipity in search. The “did you mean?” and “more like this” features enable researchers, sans librarians, to stumble onto authorities and explainers they never knew existed. Clinging to the mainstays of our jobs that vanished along with video rental stores is foolish. It evokes a vision of service where the customer’s needs are unheeded. Market-making wisdom mandates that customers must want to buy what you’re selling. An organization or class of professionals selling yesterday’s wares won’t be in business for long. It’s closing time for the old rules. Wave goodbye to them.

2 Anticipate Needs Before They Arise. As the practice of law transforms, so too do the needs of our customers. New pain points are born every day—information overload, evaluating ever-changing sources, due diligence research in a data-saturated world—and the discomforts they convey are acute. Customer service in a post-digital era necessarily demands anticipating customer needs, even before they become manifest or are articulated by patrons. This means law librarians need to see down the road, around the corner, and over the next hill while still running today’s race. It’s constantly imagining and planning for tomorrow’s disruptors and how to position the library for managing them when the time comes. Deep inside every Fortune 500 company is a department that seeks to answer one question: What’s our next move when the widget we sell today is obsolete? Forward-thinking law librarians already play in that area, but it’s time to double down on those efforts. As uncomfortable as it is to contemplate, imagine how you’d react to news that management is closing your library for lack of perceived value. What services and functions can you put into place today to forestall that outcome?

3 Make Doing Business with You Remarkable. Every interaction between the library and its customers could fall on a graph of one to 10. Was the interaction a 10? Painless, satisfying, even joyful? Or was it a one? Unhelpful, tedious, a waste of time? In the aggregate, every interaction leads to a culminating question: Would the customer do business with us again? Law libraries are well served by studiously assessing every interaction point—from the picayune to the macro—to understand how patrons perceive their touchpoints with them. Are we delighting our customers by saving them time, money, and frustration by, for example, labeling downloaded documents with titles that make sense or obtaining a complaint for free by calling upon a friendly clerk of the court? Or are we frustrating customers by not taking time to understand a nuanced question, or by hiding key information (e.g., hours of operation or how to reset a forgotten password) in poorly designed websites?

Think about the companies with which you personally do business, the ones that super-satisfy you every time, all the time. What sets that service apart? It’s probably more than a smile. And it likely involves something remarkable, not other-worldly or impossible, but something that stays lodged in your brain that you remember the next day or a week down the road. You probably shared it with friends and family and made recommendations or referrals accordingly.

Within every customer interaction that you have with patrons, create a remarkable moment. It can be just one thing that you do, for example, the speed of your service, answering an anticipated follow-up question before it’s asked, or having a face-to-face touchpoint when unexpected.

4 Make Others Look Good. Machines—smartphones, tablets, drones, and some-day, perhaps, oracles—don’t have emotions. At least not yet. They can neither intuit nor comprehend a patron’s disposition: Is she hurried, confused, frustrated, angry or thrilled? And machines—like, sadly, too many librarians—understand customer service as a one-way street: The patron needs something; I deliver; service is rendered; the customer is thankful; and the case closed. But what about the opposite direction? How often do we as librarians thank our patrons or recognize their good work? Consider, for example, rewarding a reference desk frequent flyer with some sort of thank-you-for-your-business gift. Or how about bestowing an executive-level champion with a leadership award? Or establishing an invitation-only advisory board of heavy-user legal assistants, whose membership those assistants can trumpet on their resumes or include in their annual performance reviews? Unlike computers, humans understand that gratitude ought to be a two-way street and, when genuinely expressed, can create a feedback loop loaded with
opportunity. Certainly, machines do many things well, but trading in heartfelt thanks—and reaping the rewards that such behavior sows—is not among them.

5 Join the Team ... in Every Sense. Computers are tools within a culture, but they’re not necessarily of it. The library, on the other hand, is. Embedded librarianship is by now a familiar concept, and the benefits of weaving the library into the broader parent organization are well documented. Libraries, and the professionals within them, must adopt and mirror the culture and spirit of their broader organizations. Whether entrepreneurial, mission-oriented, client-focused or bootstrap, law libraries ought to match what’s happening beyond their walls. By forming relationships with practice groups or faculty committees, librarian liaisons may better understand what makes their patrons thrive and help deliver services that empower and enable.

Librarians can also volunteer for assignments outside of prescribed functions. In today’s era of “doing more with less,” we can leverage our core strengths to pitch in where needed, including software training, business development, information technology, marketing, or communications. So long as it’s possible to step up, libraries are well served by earning a reputation as an extra pair of hands that come through for the broader institution in a pinch.

6 Help Manage the Disruption of Change. Few argue that the velocity of change within the information landscape is growing slower or more manageable. With the ever-expanding burden of mastering change—ironically enough perpetrated on patrons by digital technologies—librarians are uniquely well situated to address those challenges for constituents. Change management involves many elements, not the least of which is anxiety. While the early adopters among us may relish the bombardment of the “new,” most prefer not to toss what’s working perfectly well now for the latest flashes, whizzes, and bangs. Through deliberately designed rollouts, careful instruction and, yes, in some cases supportive handholding, we can help manage the discomfort of dislocation.

Whether teaching patrons to navigate a new database (and the maddening frustrations that accompany it), explaining the consolidations within legal publishing (and what that means for trusted sources), or integrating new technologies into a patron’s workflow (and how that can save valuable time), we’re well accustomed to singing the phrase, “Come on in! The water’s just fine!”

7 Embrace Technology—and Know Its Limitations. Many librarians I know are fascinated by technology and are perpetually brainstorming new ways to make it work on their behalf. Law librarians in particular have a long history of adapting technological advances to their purposes, including electronic research itself. Even when we can’t afford to purchase the hottest new gadgets or software on the market, we do our best to understand their features and benefits, and challenge ourselves to be conversant in them. Lately, my first reads on what’s trending in legal analytics, supercomputing, and artificial intelligence are the myriad musings of law librarian bloggers spotlighting those topics.

Yet as we seek to comprehend contemporaneous offerings, we’re equally duty-bound to share their limitations as well. A truism of technological breakthroughs is that we tend to overestimate their capabilities at first and misjudge the length of time they require to realize their potential. As teachers and information guides, librarians are experienced in distinguishing flash from substance, heat from light. By embracing technology and communicating its practical limitations, we open doors, paint possibilities, and manage expectations simultaneously.

8 Always Evangelize the WIIFM. The importance of marketing your library can barely be overstated. In the absence of confident, continuous, compelling value messaging, libraries surely lose. Along
Excelling in customer service involves choices, namely, deciding what you’re going to do and what you’re not going to do.

The way we must always crystallize the WIIFM (“What’s in it for me?”) for patrons. Too often, libraries are characterized as cost, rather than profit, centers. They drain budgets, offer few returns, and are easy targets for cutbacks. By drawing indisputable connections between library services and the benefits they convey, it becomes difficult—though not impossible—to doubt the library’s legitimacy within the organization.

While warding off peril, it also happens to be good customer service. A three-pronged approach familiar to teachers steeped in instructional design illustrates: Tell them what you’re going to tell them, tell them, and then tell them what you just told them. This structure can be useful for librarians, too. Tell patrons how you’re going to help them, help them, and tell them how you just helped them. In other words, always explain the what’s in it for me. Through your service, for example, your patrons save time, money, resources, and energy. Your patrons attract more clients, craft better arguments, win more cases, make more money, and have happier lives. Leave no room for doubt when evanglizing the WIIFM.

Chances are at one point you manually managed current awareness alerts, cataloging duties, litigation analytics, and other items computers now do routinely. Don’t be afraid to automate what you can; the time saved can be reinvested in more valuable pursuits.

Outsourcing involves sending out for hire tasks that can’t be automated. Core library functions such as reference, marketing, and more may be outsourced to independents and freelancers who can often perform key duties more cheaply than full-time staff. If your library is losing personnel through attrition or layoffs, you may have no choice but to procure independent contractors for key responsibilities.

Finally, offload tasks that are unimportant or reap no benefits. You may produce the most exquisite enewsletter that ever was, but if no one’s reading it, stop. A training calendar full of daily events sounds heroic and comprehensive, but it’s probably too much. Offering overnight reference on weekends may sound like a worthy ambition (or not), but its demands are certainly too taxing. Like chefs designing new seasonal menus, librarians need to know when it’s time to yank items and replace them with others.

Do More With Less—Automate, Outsource, and Offload. Excelling in customer service involves choices, namely, deciding what you’re going to do and what you’re not going to do. In the face of dwindling resources and staff, attempting to do everything, and do it well, is a surefire prescription for mediocrity. Three primary methods for altering or discarding formerly useful duties will enable you to invest your time more wisely: automate, outsource, and offload.

Automation allows you to leverage the power of the post-digital era to let a machine retire chores you once owned.

The power of always assessing and iterating allows you to chase improvement. Always.

The Future of Customer Service
Finally, it’s tempting to think of customer service in the post-digital era in one of two ways: as a cryptic black box with contents that are entirely new and unknowable, until that certain point in the future when its mysteries are revealed, or as a business-as-usual affair with few to no changes. The truth, of course, is in the murky middle.

Evergreen pillars of customer service—an outward orientation, problem-solving, a focus on patrons—naturally remain. Other aspects need to go: little-to-no-value offerings, tasks that technology now (or will soon) handle better, looking backwards to services once maintained by larger, better-resourced staffs. More than that, of course, the future of customer service will involve a blending of the old and new, the known and unknown, the possible and the nearly impossible.

One day, law library drones may fill the sky, powered by circuitries beyond our imagination, delivering service to patrons around the globe. As the law librarians of tomorrow launch those birds into flight, they might marvel at how far we’ve come. Then, they’ll ask themselves the most important question of the day, one that’s been asked all along: “How can we delight a patron today?”

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How information professionals can put AI tools into practice.

Artificial intelligence (AI) has been around in some form for more than half a century. The term was coined at a conference of computer scientists at Dartmouth in 1956. The scientists there believed that, just as machines during the Industrial Revolution had replaced arduous physical labor, software could similarly replace the cognitive labor of people.

During the decades that followed, computer scientists created software that could take on increasingly difficult, discrete tasks. Today, many computer scientists believe that we are on the cusp of a breakthrough in AI, and that this new generation of AI systems will transform knowledge work every bit as much as the Industrial Revolution transformed industry.
Whether or not we are on the cusp of a revolution of game-changing AI, it seems clear that software will increasingly perform legal tasks that were previously reserved for lawyers, paralegals, and information professionals. A great deal of the money paid by clients for those legal services will go to the architects of AI software. Will this be an information oligopoly, with the benefits of AI accruing to a small number of publishers and software companies at the expense of law firms, law schools, and libraries? Or will the benefits be widespread, like the creation of electric power? The answer, in part, lies with how broadly the providers of legal services and information participate in artificial intelligence. If information professionals cede the “heavy lifting” work of AI to software companies, they will be unlikely to participate in the gains of the new economy. However, if information professionals themselves use AI tools, conduct their own experiments in supervised learning, and learn how to gain new insights from legal data, there is great potential for a broad-based renaissance in legal services, in which everyone has the opportunity to participate.

**Important Insights**

What kinds of insights could law libraries draw from the use of AI tools? At the simplest end of the spectrum, AI tools can help libraries draw important insights from in-house data. For example, law firms can use tools such as IBM’s Watson Developer Cloud to convert documents from images to structured text, build chatbots that understand natural language to triage patron requests, or build search engines that run semantic searches over the firm’s knowledge management system.

Libraries also can use AI tools to help change the way that law school clinics deliver legal services. For example, the Georgetown University Law Center conducts the Iron Tech Lawyer competition, in which non-technical law student teams work with clients to create apps for justice using Neota Logic. Expert systems such as Neota Logic or A2J Author may not solve every legal problem, but they can help address simple, recurring legal problems at scale. Indeed, one-to-many software tools may be one of the only scalable ways to address the access-to-justice problem. Information professionals in law schools could be the lynchpin to this kind of development. Artificial intelligence tools can offer key insights about the cost of different matters in a law firm, helping firms that want to offer fixed-fee engagements compete more effectively for business.

One problem that law firms face is that their client-matter billing data isn’t structured enough to understand the distribution of costs for different types of matters.
Sophisticated clients are increasingly demanding that their law firms provide alternative fee arrangements such as fixed-fee billing. But without structured data, law firms have faced the impossible task of combing through historical billings to add metadata such as the matter type, stage, lawyer, rate, time, and cost—all to understand how to price future matters. AI tools offer the prospect of extracting insights even from unstructured data. This avoids tedious re-keying or data entry for past matters.

Data mashups offer even more interesting possibilities. When firms can compare their own internal billing information with public information such as dockets or public law collections, they can provide quantitative marketing materials to potential clients. Instead of touting the firm’s expertise generally, firms can demonstrate that they achieve better results faster, and at lower costs. The open-endedness of the possibilities is pretty thrilling.

Law libraries collect so many different kinds of information, it’s hard to say ahead of time what cool insights they can derive with AI tools. Data scientists will tell you that it’s often hard to know what insights are even possible until they get their hands dirty with the data sets.

Read Only, or Read/Write AI?
These insights aren’t guaranteed for everyone who uses AI tools in their library. But they aren’t science fiction, either. The only way to see what kind of insights are possible is to use the tools yourself. Artificial intelligence generally can be amorphous and daunting, but specific tools are more manageable.

For example, the IBM Watson Developer Cloud toolkit can be used by anyone. It includes tools such as natural language classification engines, tone analyzers, and document conversion tools. These are tools that law librarians can use today, in their own libraries (not in some flying-car future, but now). Libraries no longer have to only be consumers of search engines: they can now build them for themselves. (View the toolkit at bit.ly/SO17IBM.)

A great shift is coming, as great as the Industrial Revolution or the invention of electricity. The most successful libraries of the next 10 years will be the ones that embrace the new tools of the trade. They will understand the law at a deeper level, see trends in litigation before anyone else, manage themselves more efficiently, give quantitative advice, and provide justice for more people at more competitive costs.

Libraries have a unique institutional advantage. Who will take the time to learn and use AI tools in the firm? Will it be senior partners? Junior associates trying to make their hours? Law professors trying to teach, publish, and grade? Information professionals in the library have the unique background and skills to master these tools.

In short, we are on the cusp of a great era of cognitive computing for law, and it won’t be just software companies and legal publishers wielding these tools, but law libraries as well. The libraries that embrace this opportunity will be more informed and more important in this new era, providing a critical source of competitive advantage.

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Ed Walters is the CEO of Fastcase, an online legal research software company based in Washington, DC. Under his leadership, the company has grown into one of the world’s largest legal publishers, serving more than 800,000 subscribers from around the world. He also teaches “The Law of Robots” at the Georgetown University Law Center and at Cornell Tech in New York City. His work has been featured in publications such as the Washington Post, the New York Times, Legal Times, and the University of Chicago Law Review, and he has spoken extensively on legal publishing around the country.
Lessons from the Marshmallow Test: why librarians and legal information professionals must adapt to disruptive innovation.

BY PATRICIA A. SMITH

The famous “Marshmallow Test” was part of a series of psychological studies at Stanford in the late 1960s and early 1970s on delayed gratification, led by psychologist Walter Mischel. In these studies, preschool children were offered a choice between one small reward provided immediately or two small rewards (i.e., a larger reward later) if they waited for a short period (approximately 15 minutes), during which the tester left the room and then returned. In the original experiment, the reward was sometimes a marshmallow, but often a cookie or a pretzel was the reward. Nevertheless, the process came to be known as the “Marshmallow Test.”

To resist temptation, the children covered their eyes, sang, talked to themselves, and played games with their hands and feet. Some even tried to go to sleep. The researchers then tracked the subjects through high school and even into mid-life. In follow-up studies, the researchers found that subjects who were able to wait longer for the larger reward tended to have better life outcomes, as measured by SAT scores, educational attainment, and body mass index.

As Mischel points out, delaying gratification—the ability to wait and sacrifice immediate wants and needs for a goal—is at the heart of
self-efficacy and is the center of emotional self-regulation, whether the goal is to stay on a diet or pursue an advanced degree, as so many law librarians often do.

Viewing the American Association of Law Libraries (AALL) membership as their collective five-year-old selves, it is likely that most would have waited for the second marshmallow. As such, law librarians would have counted the tiles on the ceiling, pulled their hair, or become extremely interested in the grommets on their tennis shoes in order to resist the temptation of the first marshmallow. A supposed lifetime of superior SAT scores, advanced degrees, and career success awaited us, all foretold by our ability to delay an immediate victory for a subsequent prize. These traits, the ones that make us effective law librarians—the ability to be helpful, agreeable and pleasant, and to follow the rules, whatever they may be at the time—make us ill-positioned to confront the changing aspects of our profession.

**A Changing Profession**

Law librarians enter this profession for different reasons. For some, it is research. For others, a love of law. All law librarians share a passion for helping others. We enjoy learning new things. Most of us like to read. As a group, we are not risk takers; we do not like change.

The profession of law librarianship, however, is changing. We are undergoing a transformation brought about by changes in technology and within the industry we support.

In their 2011 *ABA Journal* article “Law Job Stagnation May Have Started Before the Recession—And It May Be a Sign of Lasting Change,” authors William Henderson and Rachel Zahorsky reported, “Whether BigLaw lawyers, boutique specialists or solo practitioners, U.S. lawyers can expect slower rates of market growth that will only intensify competitive pressures and produce a shakeout of weaker competitors and slimmer profit margins industry-wide. Law students will find ever-more-limited opportunity for the big-salary score, but more jobs in legal services outside the big firms. Associates’ paths upward will fade as firms strain to keep profits per partner up by keeping traditional leverage down.”

While Henderson and Zahorsky did not mention law librarians specifically, the message is clear: Law firms are being squeezed and they are cutting back. The industry associated with supporting and teaching lawyers—that of law librarianship—will be squeezed as well. (Read the full article at bit.ly/SO17Stagnation.)

Further, a 2016 Altman Weil survey, “Law Firms in Transition,” offered these stunning statistics:

- About 62 percent of the law firms surveyed indicate that business has not returned to pre-recession levels
- Almost 25 percent are pursuing the alternative staffing strategy of outsourcing non-lawyer functions
- Almost 60 percent say that overcapacity is diluting the firms’ overall profitability
- About 52 percent say outsourcing legal work is a permanent trend in the profession
- About 88 percent say fewer support staff will be the trend moving forward

Looking at the statistics, the pressures facing law firms today include price competition, the commoditization of legal work, fewer support staff, technology that is replacing humans, and the erosion of the demand for legal work.

A report from the UC Hastings College of Law, “Disruptive Innovation: New Models of Legal Practice,” characterizes the new environment this way: “What we’re seeing in the legal profession is ‘disruptive innovation,’ a term coined by Harvard Business School Professor Clayton Christensen, often heard in business circles but now making waves in relation to legal practice. Disruptive innovation occurs when a competitor enters a marketplace with a product or service most initially see as inferior—until successive improvements displace established products or even industries. A classic example is digital photography, which ultimately dethroned the venerable Kodak.”

At its peak, Kodak employed 140,000 workers, and in 1996 it was ranked the fourth most valuable brand in the United States—behind Disney, Coca-Cola, and McDonald’s. The 138-year-old company filed for bankruptcy in 2012. Many scholars attribute Kodak’s demise to its failure to recognize the digital camera as a threat. When sales of regular cameras began to decline in 2001, the company incorrectly attributed this to the financial downturn that followed the attacks of September 11. By the time they recognized the threat of the digital camera, it was too late.

The irony of Kodak’s story is that they invented the digital camera in 1975. According to the Kodak engineer who developed it, management’s reaction was “that’s cute, but don’t tell anyone about it.” Management officials were concerned it would erode the existing traditional camera base.

The legal industry is bracing for disruptive innovation as firms and

As librarians, we are now confronted with the “New Law.” We must begin to think like entrepreneurs in order to survive in this quickly changing legal landscape.
academic institutions try to avoid their own “Kodak moment.”

Similarly, the same forces that disrupted Kodak have disrupted many businesses, from steel to publishing. The pattern of industry disruption is familiar: New competitors with new business models arrive; incumbents choose to ignore the new players or they decide to flee to higher-margin activities. Thus, a disrupter whose product was once barely good enough achieves a level of quality acceptable to the broad middle of the market, undermining the position of longtime leaders, and causing the “flip” to a new basis of competition.

As Christensen and his colleagues noted in a 2013 Harvard Business Review article, “The leaders of the legal services industry would once have held that the franchise of the top firms was virtually unassailable, enshrined in practice and tradition—and, in many countries, in law. And yet disruption of these firms is undeniably under way.”

As librarians, we are now confronted with the “New Law.” We must begin to think like entrepreneurs in order to survive in this quickly changing legal landscape.

Entrepreneurial Spirit

Unfortunately, having the resolve to accomplish our innovations might not be enough. How do librarians—rule-abiding, strong, “two marshmallow” individuals—confront change? We must embrace the spirit of entrepreneurship.

“Finding new and respected ways to showcase ourselves as research and information experts to our stakeholders outside of the profession is a priority as we position the profession for the future,” said AALL member Kathleen Brown, deputy director of the Charleston School of Law, in her AALL Executive Board Q&A featured in the 2016 July/August issue of AALL Spectrum. “We are at a time in our profession where we are challenging the norms of what a library and librarian ‘is.’ This makes people in and out of the profession uncomfortable, but it is necessary so we can remain vital in the business of law.”

Echoing this thought, AALL member Jean P. O’Grady, director of research and knowledge services at DLA Piper, puts it this way: “Since the legal environment is changing so quickly—the future may require information professionals to repeatedly redesign and re-pitch their jobs. The future will belong to those who ask—not to those who wait to be asked. Rebuiting the marginalization of our profession should be our top priority. One of my mentors advised me to approach business problems ‘as if I was an outside consultant’ and focus on issues of greatest concern to the managing partner or executive director. This piece of advice has helped me question many standard library management ‘best practices’ and has given me the courage to be creative and iconoclastic in inventing new solutions and new ways of delivering service.”

The Lesson of the Pizza Boxes

One of the most valuable moves we can make as librarians is to make ourselves more visible. The days of librarians being regarded as “tender technicians,” focused solely on traditional library roles of teaching, research assistance, and collections management, are over. Both individually and collectively we must take responsibility for our destinies. We are either at the table or on the menu.

Years ago, one of my engineering friends was employed by a large chemical company. All of the engineers in his group (about 10) were involved in a high-visibility project, and many late nights were in order. One of his peers, we’ll call him Steve, had a habit of working late and leaving the empty pizza boxes in front of the door to his office. My friend’s boss, an early riser, would see the pizza boxes in the trash the next morning (or sometimes still in the hall the day after). Every year, the engineers were rated, ranked, and assigned to a position on a bell curve. The top 5 percent of the engineers were promoted to the next salary grade.

In my friend’s group, this equated to one engineer who could count on a salary bump. When the time came for evaluations, the overworked boss had to choose between 10 well-qualified people. He knew that Steve, besides doing good work, had left evidence of his toil on behalf of the company. The pizza boxes were a sure sign of his contribution. Steve got the raise.

My friend—who by engineering standards was smart and hardworking, and by his estimation had made as much of a contribution as others in the group—was bewildered and perplexed.

Of course, the story is more complicated than that, and I am not suggesting that you leave disposable food containers about so your boss will notice your superior performance. However, it is no coincidence that the one whose performance was the most visible was the one that received the promotion.

AALL President Greg Lambert, a blogger for Three Geeks and a Law Blog, adds, “The most critical function of the library is not simply about providing good service. Good service, along with a good collection, a well-maintained budget, and on-demand responses to the needs of the law firm are the absolute basics of what a law library does. If that is what you provide, you are doing the minimum. If you are a manager of people, you know what it is like to manage those that just do the minimum. You keep them around, but if you ever got a chance, you’d replace them in a minute. Think about how your firm’s management committees view departments that just bring in the minimum to the firm. Your services and your people must be viewed as an integral part of the organization.” (Read Greg’s full blog post at bit.ly/SO173Geeks.)
From the shifting landscape of the legal market to the elevated focus on firm culture, numerous factors are spurring the legal industry to operate in a leaner, more creative, and higher-performing fashion. How can law firms reimagine their workspaces to adapt to transformations in the legal industry?

Why designing successful spaces means balancing business and culture.

BY STEVEN J. MARTIN

The Business of Law
Today’s law firms face particularly acute bottom-line pressures. Due to a diminishing demand for legal services and rising real estate costs, firms are being compelled to more carefully manage and monitor expenses in an increasingly competitive market. This increased scrutiny on every
dollar has significant spatial implications. Firms, whether renewing a lease and staying in place or relocating, are exploring creative strategies to accommodate growth in a reduced footprint and be more efficient. In an effort to optimize space, firms are taking cues from workplaces in other industries. At the same time, they’re also looking to extract lessons on using the workplace as a recruitment tool. The competition for the best talent—whether it’s the next generation of associates or key senior lateral hires—is key to fruitful growth. Add up these factors, and it becomes clear that the strategic planning and design of the legal workplace plays a more significant role than ever in impacting the business of law—that is, a firm’s profitability and ability to compete.

The Culture of Law
Financial considerations aren’t the only drivers of design in today’s law firms. Increasingly critical to crafting a successful, high-performing legal workplace is insight into the culture of law. Recent surveys of millennials in the legal industry have revealed that they identify a firm’s culture as the primary factor in selecting a firm, with work-life integration following closely behind. The ability to work in an environment that reinforces a firm’s mission and exudes an atmosphere of energy, engagement, and collegiality is growing in importance for legal professionals.

In addition, many lawyers, especially top-performing lawyers, now have more choices as to where to work. They often choose to get out of their private offices to work with others in a wider variety of work spaces, including open work areas, more casual gathering settings, and conference rooms equipped with audio-visual capabilities that support virtual connectivity as well as face-to-face engagement. Such freedom is supported by today’s technologies, which un tether us from our desks and give us the freedom to work nearly anywhere. It is now common to find an attorney enjoying a cup of coffee while working in a café booth, or see a group of attorneys gathered in a team room that has writable walls and large, flat panel monitors to view documents and facilitate collaboration.

Co-existence in the Evolving Legal Workplace
As firms work to create modern and competitive spaces, it’s becoming clear that the business and culture of law must happily co-exist in order to enable firms to meet the demands being placed on today’s legal industry. Of course, that begs the question: How are firms supposed to balance these two forces?

Law has always been focused on precedence, and most firms are eager to learn about the strategies that their peer firms are implementing before taking the plunge. But a few trailblazing firms have been trying out new ways of doing things with pilot (experimental) floors, allowing attorneys to opt-in to participate. These organizations are taking a more progressive approach in anticipation of lease expirations to test new ways of working. These pilot floors have featured a wide variety of work settings and amenities—elements that address the culture of law—as experiments designed to yield insights and feedback into which furniture settings and design elements resonate and which do not. With the goal of creating open, well-lit, and dynamic workplaces that foster interaction and collaboration, recently completed pilot floors have included areas of open-plan desks on the windowed perimeter, as well as enclosed
glass-fronted offices. The enclosed offices are smaller in size than those of the past—and less square footage means reduced real estate costs, which speaks to the business of law—but they are furnished in a way that facilitates meeting and collaborating with colleagues, as well as completing individual work. Whether in an enclosed office or in an open plan, the desks have sit-stand adjustability with easy access to docking and charging mobile devices. Post-occupancy surveys have revealed that the attorneys working in the open-plan work settings feel less isolated, even while performing individual, focused work, as they are more aware of colleagues working around them. Call it working “alone together,” if you will.

Adjacent focus rooms, furnished in a variety of ways, offer a quiet place for private phone conversations, discussions with colleagues, or conference calls on speaker phones. They also serve as alternative settings for work requiring greater concentration. The attorney office zones are interspersed with collaborative teeming areas, some furnished as more formal meeting rooms and others as casual spaces. All options feature audio-visual capabilities.

The pilot floors also feature a range of amenities that support millennials’ interest in work-life integration. These amenities often include a café with a variety of seating types, healthy snacks, and, most importantly: an espresso machine; a game room with ping pong, foosball, Wii, a putting green, or video games; a landscaped outdoor terrace with Wi-Fi; a nap room or “energy pod”; and a treadmill office. Given the choice of working remotely or working at the office, amenities such as these that encourage opportunities to socialize with colleagues and to be mentored by more experienced attorneys will entice lawyers to choose the office.

The Future
The greatest challenge facing leaders planning for a new workplace is finding the right balance between achieving greater real estate efficiencies while crafting workplaces that attract, energize, and inspire those working in them. Finding this balance will most assuredly result in a law firm’s optimal performance, giving the firm a competitive advantage and helping it to achieve its business objectives, while simultaneously transforming the firm’s culture.

READ

AALL2go EXTRA

Steven J. Martin, AIA, LEED AP is principal in Gensler’s Washington, DC office and is a firmwide leader of Gensler’s Global Law Firm Practice. Steve applies more than 30 years of experience in strategic planning and design as project director for a diverse group of global, national, and local law firms. He is also a Fellow of the College of Law Practice Management.
LEADER PROFILE
PUTTING KNOWLEDGE INTO ACTION

After becoming an official mouthpiece for legal information professionals and law librarians alike with his 3 Geeks and a Law Blog, Greg Lambert decided to put his words and ideas about what librarians should be doing as a profession into action by becoming an active participant on several American Association of Law Libraries (AALL) committees and using his new platform as Executive Board President to drive the Association and the profession forward.
Greg Lambert has had the good fortune of working in all three library types throughout his now 20-year career in librarianship. He attended both law school and library school at the University of Oklahoma, earning his JD in 1997 and MLS in 1998. “I went to law school initially thinking that I would be practicing law when I got out, but I was married to a librarian and after the first year she convinced me law librarianship was the way to go,” said Lambert. After finishing up school, he initially worked for Oklahoma City Law School as the electronic services librarian, before moving to a government position at the Oklahoma Supreme Court, where he managed the public legal information website—Oklahoma Supreme Court Network (OSCN)—and 75 of the 77 country law libraries within the state. After a few years, he moved to Houston to serve as project manager for what was then an OCLC (online computer library center) regional provider called Amigos Library Services, headquartered in Dallas, where he led a project to replace the collection that was destroyed at the University of Houston’s Law Center during tropical storm Allison. In 2004, he went to King & Spalding in Houston to become the library and records manager, a position that served as his first initiation to law firm librarianship. He remained at the practice for eight years before taking on his current position as chief knowledge services officer at Jackson Walker LLP. “I’ve pretty much been happy wherever I’ve landed, but in the firm environment, I have really found my niche,” said Lambert. “In government and academia, you have certain constraints, especially budget constraints, where if it doesn’t fall within the budget that year, it’s almost impossible to get something outside of the plan done. In law firms, we might bring 10 new attorneys into a brand-new practice area and we have to quickly respond to that. I have found firms really fit my style of management.”

How did you get associated with AALL?
I was in law school and Nickie Singleton, who was the law library director at the University of Oklahoma at the time, caught wind that I was taking library courses as well as going to law school and had plans to be a law librarian. She quickly grabbed me and said, “All right, you absolutely have to join AALL.” She didn’t force me, but she showed me the benefits of being a member and how that would help over time.

Now that your term as president has officially begun, what is first on your agenda?
First thing is to drink a strong cup of coffee. All jokes aside, we’ve done an excellent job in the past decade within the Association of minimizing the effects of the shrinking membership, but it’s really time to look for ways to stop the decline in numbers and revenue and look for more ways to grow the Association. One of the things I’ve learned from working in law firms during a major recession is that you can’t cut your way to prosperity. AALL needs to find ways of retaining existing members, recruiting and attracting new members, as well as selling educational and other services to customers of legal information services. We have a lot to offer, so we need to make sure that we act in a way that makes our members and customers look to us first to satisfy their needs within the law library and legal information services areas.

Do you have any special initiatives or goals planned for the coming year?
The theme for this year is “From Knowledge to Action.” Law librarians and others in the legal information profession tend to be some of the smartest, most educated, and most credentialed members of their organizations. However, this
QUICK HITS WITH GREG LAMBERT

ebooks or print? I’m more about the content than the platform, but if I had to choose, I would go with print.

Favorite takeout? Thin-crust pizza. I grew up outside of Chicago, so you would think I would be more of a deep-dish kind of guy, but I love a nice, thin, New York-style pizza.

Favorite quote? From a not very good movie. “The choices we make dictate the life we lead.” Danny Davito said this while playing Bill Rago in the film Renaissance Man.


Nonfiction: Tranny: Confessions of Punk Rock’s Most Infamous Anarchist Sellout by Laura Jane Grace. Being the father of a son who is transgender, it was a great read about one of my favorite musicians who also went through the process of transitioning genders.

Favorite TV show to binge watch? Anything from Joss Whedon: Buffy the Vampire Slayer, Angel, Firefly, and now Agents of Shield. I love anything that he does. The one show I will try to watch live each week is The Walking Dead.

Favorite app? There is an app called Bands-In-Town that tracks concerts and music shows that are going on in your city. You tell it where you are and it will give you a list of shows that are playing in your area.

Favorite travel destination? West Hollywood, California—I love the music scene there and have flown out to hear local bands several times.

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How do you stay engaged and passionate about your work? I surround myself with other passionate people who are constantly challenging the boundaries of the legal information profession and beyond. I like being around those who don’t start the conversation with “We can’t do that,” but rather start with “Why aren’t we already doing that?” One of my favorite stories to tell is when someone I was interviewing with commented in an off-the-cuff kind of way, “Why would you limit yourself to that?” I took that as a challenge and decided that I would take more risks, and ask to do more nontraditional things—I really wanted to make sure that my voice was included in the conversation. You have to have passion in order to challenge these traditional views.

What is one of the most valuable lessons you’ve learned in the professional leadership positions you’ve held? I have learned that you become successful by solving the organization’s problems, not just the library’s problems. Find out what keeps the stakeholders in your organization up at night and find ways of solving those issues. You can have a library that runs like a well-oiled machine, but if that doesn’t solve your overall organizations problems, then it doesn’t really matter.
What do you think is in store for the future of the legal industry?
A slow, steady, methodical change. For those that can take the knowledge of the industry and create an action plan addressing these changes, there is a world of opportunity. In the law firm world, we talk about automation, artificial intelligence, commoditization, and the shrinking of the legal market. For the creative and the savvy, that change and uncertainty is a potential goldmine. I see it as a way for the industry to finally find ways of plugging holes in the system. Courts could speed up the process of providing services to the public. Access to justice issues can be addressed and improved. Universities can provide new styles of teaching that not only prepare students to think like lawyers, but also prepare them for the new opportunities that help fill the gap in legal services between the haves and the have-nots. Law firms and corporations can decrease the overall cost of individual legal services and increase the proactive process of risk aversion and due diligence over the traditional reactive methods of being unprepared. There's a solid place in this new legal industry for law librarians and legal information professionals, but you have to be engaged, and always be looking to solve the overall problems addressing your organization. If you're doing that, you definitely have a seat at the table in the future.

What's the value in being a member of AALL?
The best thing is the people. AALL is the best place to leverage peers, education, and advocacy for both the legal information profession as a whole and the legal information professional individually. Being a member of AALL means you have near-instant access to thousands of peers, but even more important is when you find those dozen or so close associates who become friends whom you can go to and pick their brain about how they would handle certain circumstances, which can be truly invaluable. We also tend to be exposed to the newest changes in vendor products. We train our members on how to be leaders in both the law library field as well as being leaders in the industry as a whole. I think one of the best things that I enjoy is that we stand up for the values of law librarianship and make sure that legal information is accessible in our democratic society. It's a powerful thing that we do.

What is the best career advice you've received?
I used to say it was when someone asked me, “Why would you limit yourself to that?” However, I have changed that recently. My good friend and fellow 3 Geeks blogger, Toby Brown, gave me some sage advice when I was asked to take on a project in my firm that was definitely not a traditional law library role. Toby asked me:

- Is this something you can do, and do well?
- Is this something that will be valuable for the firm?
- Is this something that solves a problem currently facing the firm?

I answered “yes” to all. He then replied, “Then shut up and do it.” That's probably the best advice I've ever received. I was able to look at things holistically—determine if this is solving a problem for the organization as a whole, and if so, then do it.

What do you find most rewarding about your job?
Again, I go back to the people. My greatest joy is watching the people on my team succeeding. I’ve been in this profession for 20 years now, and there are librarians and others who have once worked for me now leading their own departments. I’ve watched research attorneys who have worked for me become so valued and successful at the firm that they were then put on a partner track. I’ve always believed that people do well when they feel they are making a difference. I’m also a huge believer in the idea that “if you look good, I look good.” I love it when people make me look good.
Question: With technology playing a big role in the transformation of law, how do you see it changing the delivery of library services?

Technology is ubiquitous, and affects most, if not all, aspects of delivering legal services. Libraries have been successfully evolving in response to technological innovations, particularly in the areas of training, collaboration, and cost management.

Libraries already play an important role in teaching and training. The need for this will increase as we ensure our students and lawyers not only have the technical skills for using research tools, but that they can also apply those skills to use knowledge management, analytic, and collaboration tools effectively. Libraries will need to provide targeted and contextual training for specialized practice resources, as well as teach how to integrate and synthesize results across multiple platforms. There will also be a role for the library in training support staff, as they are required to conduct basic legal research, and to work within more complex document systems.
The ever-changing environment of information technology requires that librarians use their collaboration skills to work with other administrative groups in their organizations. For example, we need to access information from financial and business development systems in order to provide targeted information for lawyers to meet clients’ needs. This will also extend to library publishing in the sense that very targeted webpages, websites, dashboards, and other communication platforms will need to be created to support clients and business development efforts. We will therefore need to collaborate more with our technology department and support their efforts to launch and maintain new products and tools.

As our organizations invest in new and expensive technology, libraries will be pressured to contain and reduce costs—however unfair. We will need to apply analytics to library resource usage via enhanced or new electronic resource management tools to assist in contract negotiations, resource utilization, purchasing decisions, and transparency. Our library management software must be able to provide the metrics and financial data to support our decisions.

While technology will not dramatically transform our core library functions of acquiring, managing, and delivering information to our users, it will offer new opportunities as to how we deliver them, while strengthening the library’s role within our organizations.

To say technology is changing so fast we can’t keep up is almost cliché these days. We’ve seen this frenetic pace of change for several years now. Advances in artificial intelligence, an increased need for knowledge management, and new job titles—such as data scientist or innovation and technology attorney—are just a few things sure to have a lasting effect on the practice of law. Likewise, these changes will have a profound effect on legal education and library services, especially in regards to what librarians teach and how that material is presented to students and faculty.

Several law schools have added classes on law firm technology to their curriculum, and many of these courses are taught by librarians. Such courses often focus on the knowledge management tools law firms are using to organize their internal work product as well as their external informational resources. Traditional legal research courses are taught through lectures on legal research, and feature problems so students can practice using the strategies and tools discussed in the lectures. In recent years, some courses have moved entirely online. According to a recent article in the 2017 May/June AALL Spectrum, “Artificial Intelligence: Legal Research and Law Librarians,” improvements in artificial intelligence and voice recognition technologies will result in dramatic changes in how research is taught and how data is retrieved.

Even as information retrieval becomes more automated, the importance of distinguishing reliable sources from the noise reaches critical levels. Librarians will need to guide users to understand how legal information is organized electronically, explain what a database is, and describe what resources are available to them. We live in an age of alternative facts and cyber hacking, where misinformation is rampant and easy to find, and where reliable sources are locked behind paywalls.

Librarians are uniquely positioned to educate users on how to use technology to protect confidential communications, to use cybersecurity to protect work product, and to engage in secure ediscovery and knowledge management.
Welcome to the brave new world of blockchain. Some say it’s the future lifeblood of the internet and commerce. It will provide the foundation of the most robust information security system ever created. It will allow access to economic tools currently unavailable to billions. You may have seen many articles on blockchain recently—thirteen, in fact, were included in the American Association of Law Libraries newsletter, KnowItAALL, since its launch on December 6, 2016. Maybe you’ve never heard of blockchain. Or maybe all you’ve heard about it is the hype.

So, what’s a blockchain? The short explanation: It’s a network-based tool for storing information securely and permanently. The information in a blockchain can be authenticated by members of the public, but the information can be accessed only by those who have permission.
Blockchains can take any information—from simple ledgers to complex contracts—and store it online in containers called “blocks.” These blocks are then encrypted, meaning that the information is translated into a unique series of letters and numbers called the “hash.” The hash is created using a special encryption key. Only users who have the key can read the information.

The blocks are then linked together. Each block’s information includes the hash of the previous block in the chain, along with a time stamp. For example, a hash might look like this: 00002fg5d550aae9046ff80cccefa. The tools that create hashes use sophisticated cryptographic calculations so that each hash in a particular chain will start with a set of standard characters, such as 0000.

How does this keep information secure? The blocks are “decentralized,” meaning that different blocks are stored on different computers, creating a distributed network of information. This network is public, so members of the public can see the chain and read the hashes.

Changing the information in any block changes its hash. This change then moves up the chain, changing their hashes as well. The hashes in blocks that are further up the chain will no longer start with the standard characters. For example, they won’t start with 0000, and the time stamp will have changed. That means anyone can now see that data in the chain has been compromised.

Some blockchains are single chains, but many blockchains work by distributing copies of the whole chain in the decentralized network. If the copies don’t agree with one another, the blockchain’s users will elect to accept only those chains that match, and will discard any compromised chains.

**Foundations: Bitcoin**

If you’ve heard of blockchains, it’s probably in relation to Bitcoin, an online currency that is recorded in a blockchain. Bitcoin isn’t issued by a government or bank, instead, it is created through sophisticated mathematical algorithms and distributed over a large network.

Bitcoin’s popularity stems from two features not available in most other monetary transactions. First, no intermediary, such as a bank or PayPal, is needed. These intermediaries often take a hefty fee, particularly in international transactions. Users can transfer money directly to each other, and the parties don’t need to trust each other. By using Bitcoin’s blockchain, the parties know their transaction is secure. Second, no copies of the funds are made—as happens in many online transactions—so the funds cannot be “double spent.” The records in the
Automate and outsource legal processes. Smart contracts have generated the most discussion. These contracts are coded into blockchains and make contract execution work more smoothly.

First, there is only one copy of the contract, and all parties have access to it. The contract is completely transparent, and the terms of the contract are coded into the blockchain. It is therefore impossible to create fraudulent or inaccurate copies of the contract, because the terms can’t be changed without the agreement of all parties to the contract.

Second, the smart contract can be configured to be self-executing. That is, verifiable events trigger the next stage of the contract. Proof of those events can be added to the chain. For example, Widgette Co. agrees to sell Acme Co. 100 widgets for $1,000 and ship them one week after payment. When Widgette Co. produces the 100 widgets, its system adds this information to the blockchain with a time stamp. Acme Co.’s system pays $1,000 and adds that information to the chain, also with a time stamp. Widgette Co. then ships the widgets, and that time-stamped information is added. Finally, Acme Co. records when it receives the widgets.

The blockchain can even include a dispute resolution mechanism. If a problem arises—such as Acme Co. claiming that Widgette Co. shipped the widgets after two weeks instead of one week—this information can be verified by reviewing the information in the blockchain. The chain can then arbitrate the dispute based on preset terms. For example, Acme Co. automatically would receive a 1-percent refund for each additional week that shipping is delayed.

The legal possibilities are not limited to contracts. Lawyers have been considering smart wills that can execute themselves, thereby avoiding probate. Blockchains could also be used in real estate transactions to help avoid using third parties. For example, a blockchain real estate transaction wouldn’t need the services of an escrow firm.

Governments Respond
Governments have started to take notice of the possibilities that
blockchains offer. Arizona’s governor recently signed an amendment to Title 44, Chapter 26. This amendment allows use of blockchain technology in the state, declaring that “[a] signature that is secured through blockchain technology is considered to be in an electronic form and to be an electronic signature” and “[a] record or contract that is secured through blockchain technology is considered to be in an electronic form and to be an electronic record.” Vermont is also working on a bill to allow the use of blockchain technology. Other governments and organizations, including the European Union, are investigating blockchain’s possibilities. The Republic of Georgia uses blockchains to secure government transactions involving property. Other governments are considering following suit, including those in Sweden, Honduras, and Cook County, Illinois.

**Education and Libraries**

Are blockchains useful only for financial transactions? Absolutely not. Educational institutions are considering putting transcripts and graduation credentials on blockchains. This would permit alumni to easily access their own information and verify its authenticity. It would also help those students who enroll in classes at different universities to pull their information together into a single source. The Massachusetts Institute of Technology already offers blockchain-based certificates for some programs.

As for libraries, blockchain could be used for just about any kind of database or record keeping. For example, blockchains could be used to record circulation transactions, though many libraries may not want to keep this information permanently. Blockchains also could be used to establish the provenance of archival materials. The blockchain would provide a permanent ongoing record of who owns materials and how the transactions took place.

Most promising is blockchain’s possible role in authenticating primary sources. The security that blockchains provide would prevent records from being tampered with. When a source is updated, the update can be added to the chain with a verifiable time stamp—making it easy to determine which version is the latest of an authentic document. Such a system could also be standardized using one of the blockchain technologies already available. Governments would not have to create their own systems from scratch. Those involved with implementing the Uniform Electronic Legal Material Act (UELMA) in the states are considering blockchains as a possible tool.

**Roadblocks and Possibilities**

Despite the many possibilities blockchain offers, before being widely implemented, it must first overcome several issues. There are already existing systems and regulations in place for many problems that blockchains could solve. For example, there has been discussion about using blockchains for health records, yet the current regulatory environment for these records would make creating a new system difficult.

Blockchains are also not easy to implement. Setting up a blockchain requires sophisticated technology skills. Lawyers—particularly lawyers working with self-executing contracts—would need to work with coders to create them.

That said, the use of blockchain will most likely continue to grow, particularly to solve problems involving security and authentication. One area that offers great possibility is using blockchains to create secure online identities that could be used to access online services and password-protected websites. New approaches are needed to prevent ID and data theft, and the blockchain may be just the tool for the job.
Algorithms Are Created by Humans

When searching online, legal researchers must rely on the teams of engineers who created the algorithms that power the searches. It is easy to forget that the computer-generated results returned by a search are determined by the choices that humans made when the system was designed. All algorithms do is follow the rules set by humans who import their own biases and assumptions into the algorithm. With legal research, though, the teams that create the algorithms for legal research databases are trying to solve the same problem: The algorithm should return results that are relevant to a researcher who has entered specific search terms—terms that ought to be related to the legal problem that needs to be solved. Wouldn't that mean the search results would be similar? Does it really matter that the algorithms for each legal research database might be created by different teams of humans?

Understanding the human element in search algorithms, and appreciating how it affects search results.

BY SUSAN NEVELOW MART
As it turns out, the human element in algorithms matters a lot. I recently conducted a study comparing the top 10 results of 50 legal searches in six different legal databases. The study looked at Casetext, Fastcase, Google Scholar, Lexis Advance, Ravel, and Westlaw. The study limited the database for each search to reported cases in a specific jurisdiction. Because that pool of information is nearly identical, using jurisdictional limits allows true comparisons of the work each algorithm is performing when it processes the search.

The results of the study certainly indicate that every group of humans will solve the same problem in a very distinctive way. An average of 40 percent of the cases in the top 10 results in each database were unique to that database. Only a few cases turned up in all six databases. Every database has a point of view, offering unique responses to a legal problem that no other database provides. That is because each database makes different choices about how to process terms in a search.

**Humans Make Choices About How the Algorithm Will Work**

Legal researchers do not know exactly how the algorithm in any given legal database works. It is, however, possible to know some of the variables the engineers work with when they create algorithms for legal research.

Legal researchers do not know exactly how the algorithm in any given legal database works. It is, however, possible to know some of the variables the engineers work with when they create algorithms for legal research.

- **Proximity:** Humans decide how close those words have to be to each other to be returned in the top results.
- **Stemming/Other Search Grammar:** Humans decide which terms are stemmed, (i.e., which legal phrases the algorithm recognizes without quotation marks) and if and when legal phrases are added to the search without researcher input.
- **Network/Citation Analysis:** Does the system rely on citation analysis to enhance the results? Humans decide if so, and how.
- **Classification/Content Analysis:** Does the system boost results by mining its own classification system or mining information in other legal content in the database?
- **Prioritization:** Relevance ranking is one form of prioritizing that emphasizes certain things (like the things in this list) at the expense of others.
- **Filtering:** Including or excluding information according to specific rules or criteria.

Once decisions about how to implement these elements are coded into the algorithm, searches are automatically executed, and researchers have little insight into why certain results are returned.

**Algorithmic Accountability**

Legal researchers need to know more about how algorithms work. Understanding how terms are being processed and what content is being privileged would enable researchers to create better searches and would inform legal research pedagogy. There are new entries into the legal research market, and existing interfaces and algorithms change regularly. Just learning to use a specific legal tool will not enable researchers to deal with every new resource or interface unless they are taught to evaluate interfaces and algorithms. The more information legal database providers give researchers, the better those researchers will be.

There is, of course, some information about how algorithms operate. Each legal database provider does publish FAQs, videos, and handouts about how to search in its database. However, the information is not very detailed. For a more comprehensive discussion of what each of the companies in the study says about its search functionality, see my much longer article to be published in Volume 109, Number 3 of *Law Library Journal,* “The Algorithm as a Human Artifact: Implications for Legal [Re]Search.”

Asking for more information often works. Lexis Advance released a fact sheet on jurisdictional filtering when a specific request was made. No trade secrets were revealed, and researchers now have more information about the search process. Please help by requesting more accountability—the more voices that make the request, the more likely it is that a legal database provider will grant it.

**Putting the Algorithms to Work**

For each of the 50 searches in the study, the research assistants searched in one specific jurisdictional database. Searching with the jurisdiction had to turn up at least 10 results in each of the six legal databases, so that there were 10 cases to compare from each search.
The decision to limit the results to the top 10 was based in part on a desire to limit the number of cases that had to be reviewed to compare 50 searches in six different databases and in part on the assumption that modern researchers expect to find relevant results in the top 10. Studies show that internet users generally focus on the 10 top results. The default in Google, for example, is 10 results. Finally, our intuition tells us that the top results should be the best results. Why else are they at the top?

The study assumed that the goal for a legal research algorithm is to return results the researcher will find relevant. I doubt that any database provider would dispute this goal, and that percentage is high—about 40 percent of the cases in the top 10 results are unique—that is, they only appear in one database. There is not a lot of overlap in the remaining cases. On average, 25 percent of the cases are in only two of the six databases. Only seven percent of the cases show up in five or six of the databases.

If you isolate Lexis Advance and Westlaw, and just compare the cases that appear in those two databases, the results are even more striking: 72 percent of the cases that returned in the top 10 results are unique.

The first conclusion from the study is that, as a first stop on the research process, every database is going to return
a lot of unique results that will in turn frame the rest of the research process. Of course, no legal researcher should stop with one search and 10 results as the end of the research process.

Relevance in Legal Research

The second inquiry checked whether or not those top 10 results actually were relevant. Relevance is a highly contested subject, particularly for lawyers, some of whom challenge relevance for a living. So the study needed a definition of relevance that could be understood and shared by all of the coders, and would relate to the way lawyers think about legal issues. Here is an example of a search that student coders were given:

special relationship constitutional duty protect public from crime (N.D. Cal.)

Lawyers with any expertise can immediately translate that into an actual legal issue: While state officials normally do not have a constitutional duty to protect the public at large from crime, a duty may (or may not) be imposed by virtue of a special relationship between the state officials and a particular member or class of public. That broader legal issue sets the stage for relevance determinations. Student coders were given that background statement as a framework for their determinations of relevance. If a case they were coding could be helpful to determining the contours of that special relationship in any way, it would go into the pile of cases that are or might be relevant. This is a very broad view of relevance, but it is one that is typical of a researching lawyer’s first cut through a case database. This type of relevance is what author Stuart Sutton (The Role of Attorney Mental Models in Case Relevance Determinations: An Exploratory Analysis) calls creating a “mental model” of the law, as these cases might play some cognitive role in the structuring of a legal argument.

The next question is how did the algorithms do when it came to turning those keywords into cases that were relevant to the legal issues the searches reflected?
There is clearly a clustering of results here. The oldest databases provided more relevant results. Lexis Advance had 57 percent relevant results, and Westlaw had 67 percent relevant results. Casetext, Fastcase, Google Scholar, and Ravel had an average of 42 percent relevant cases.

The next logical question is how many of the unique cases were relevant?

Recall that every database returns about 40 percent of unique cases. Here, the four newer entries returned an average of 11 percent unique cases, Lexis Advance returned about 20 percent, and Westlaw returned slightly more than 30 percent of unique cases. Also, recall that the overlap between just Lexis Advance and Westlaw is only 28 percent.

**Age, Numbers, and Time**

The age of cases each database returns is different. Westlaw and Fastcase had the highest number of new cases (approximately 67 percent), with Casetext right behind at 64 percent. Ravel and Lexis Advance had an average of 56 percent newer cases. Google Scholar had the highest number of older cases. Nearly 20 percent of Google Scholar’s cases were from 1921–1978. Google Scholar relies heavily on citation count, and that privileges older cases.

The number of cases each database returns from a search is quite different. At the fiftieth percentile of the number of cases in the results, Lexis Advance returned more than 1,000 cases. Westlaw, Ravel, and Casetext returned just over 100 results. Google Scholar returned 180 results, and Fastcase returned 70 results. Relevance improved slightly for Lexis Advance as the number of results went up, but the number of results did not affect relevance rankings for the other five legal databases.

Time is critical to this study, which is a snapshot of the results with the algorithms as they were when the searches were performed. Database providers are constantly changing their algorithms. Although you could run the exact same searches in the exact same databases, the cases would be very different. And not just because new cases have been added.

**POV**

We now know several things about these databases that we did not know before. One is that older and more established databases have an edge in returning cases that are relevant and unique. These databases (Lexis Advance and Westlaw) have a much larger base of user history and they both have complex classification systems and secondary sources to mine from. Each classification system and set of secondary sources is very different. So, each algorithm is relying on a very different point of view in terms of content. As long as we are dealing with algorithms that import viewpoints into the search results regardless of the researcher’s intent, it is good that the viewpoints are different. In the same way libraries want different authorial viewpoints in the treatises others collect on a particular subject (budgets allowing), so too would we want different viewpoints in our legal databases.

Different as the mechanisms are for creating Key Numbers in Westlaw and Topics in Lexis Advance, both of these classification systems rely heavily on the Langdellian worldview of the nineteenth century. Look at the entry for contracts in each of these databases, and, although the order differs, the subject matter is broken down into similar patterns of formation, interpretation, performance, defenses, and breach. These are recognizable to any law student. It is easy to speculate that searches based on legal concepts that have a long history will be the searches that have high success rates in these older databases. There have been many articles written about the slowness of Key Numbers in responding to new legal topics.

The newer entrants into the legal research market—Casetext, Fastcase, Ravel (now part of Lexis Advance), and Google Scholar—may be offering, in their 40 percent of unique cases, something outside of the range of that Langdellian worldview. In the new range of value-added offerings on their results pages, such as parentheticals in Casetext and the citation visualizations in Fastcase and Ravel, these databases are offering new forms of serendipity in search and adding their own unique value to the cognitive universe a researcher is trying to construct.

**Final Thoughts**

The important takeaways for researchers and teachers are that every algorithm is very different and every database has its own point of view. Researchers need to understand that the variability in results requires multiple searches with multiple terms and differing types of resources. Redundancy in searching is necessary to ensure you are getting a good set of relevant results. Researchers cannot rely on the black box of the algorithm and be satisfied with their initial results.

Since every algorithm and database interface is a completely human construct, and every search is a completely human construct, the researcher should view the online search process as a human interaction, moderated by technology. The goal is actually a very old one in the history of online research: We, the human researchers, need to mediate the information request so that the human engineers who created the algorithm will give us what we want, and vice versa.

### AALL2go EXTRA


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The halcyon days of the law library as the heart of the law school, the centerpiece of the law firm, or the legal information watering hole for the legal community appear to be fading into the past. The electronic components of this “heart” are making it easier for our patrons to access legal information in a time/place/manner that is convenient for them, regardless of whether or not our physical doors are open. One of the many challenges law libraries face today is how to reach the patrons outside our walls. The shrinking physical law library is not a new phenomenon: it has been ongoing for the last 20 years. How to reconfigure our physical spaces has been an important discussion for most library managers and directors. How can libraries reach legal researchers who don’t know what services or information our institutions offer? Today’s librarians must think outside the box and be creative in order to draw patrons into the library and showcase the different resources the physical space can offer. Following are best practices for librarians to effectively reach out to their patrons—beyond the physical walls of the library—to
showcase the valuable services that the library provides in academic, private, and government institutions.

**Academic Law Library Initiatives**

The academic law library has seen an increasing loss in foot traffic through its physical facility. This is true for many reasons, including, but not limited to, declining enrollments, the changing study habits of millennials, and the dramatic increases in the dependency on electronic resources. To meet these challenges, academic libraries have undertaken several initiatives to bring information to their patrons outside their physical space.

One initiative academic law libraries have successfully implemented is securing subscriptions to online study aid packages that are available from major publishers such as LexisNexis, West Academic, and Wolters Kluwer. Unlimited access to these study aids allows the law library to offer a very useful academic resource to students on a scale previously unattainable with print. For example, in December 2016, the Northern Kentucky University, Chase Law Library saw 256 students (out of 400) access the online West Study Aids a total of 1,661 times electronically.

Further, academic law libraries can harness their electronic resources in other creative ways, such as working with faculty to provide additional research classes as necessary. For instance, the library can subscribe all members of a seminar class to one of the Bureau of National Affairs (BNA) online newsletters. At the University of North Texas-Dallas, librarians build subject-specific Libguides and embed them directly into a course’s online page.

Many schools also have electronic bulletin boards (display screens) throughout their buildings. Libraries can utilize these resources to promote the law library and highlight special events, services, and personnel throughout the building. The University of Louisville’s Law Library has control over the electronic display monitor located near the library’s entrance. The library creates slide shows that are displayed on the monitor to provide information about the library, including its hours, short features on a member of the library staff, and new title acquisitions.

**Email/Social Media to the Rescue**

Email and social media can also be useful tools to reach out to library patrons. For example, at Yale’s Law Library, the librarians electronically send patrons a weekly “Tip of the Week,” describing an aspect of the law library’s services. Emails, Facebook postings, and electronic bulletin boards all provide law libraries with additional means of reaching patrons beyond the library’s physical space. Further, a library’s physical holdings do not need to be tethered to the physical boundaries of the law library. Many law schools have legal clinics, both on and off campus. These clinics provide the law library with a wonderful opportunity to provide services outside the library. For example, the law library can arrange to have a subject-specific set of materials placed inside the legal clinic. This has the dual advantage of serving students “where they are,” while reminding them of the value that the law library adds to their experiential learning.

**Student Engagement**

Academic libraries can also build small (or large) popular collections in the student commons areas. In fact, some academic law libraries have begun placing study aid collections near popular gathering spots for students.

These common areas provide law libraries with another touch point for students. Many organizations and vendors—think Barbri and the other Bar review providers—have a continuous presence in these common areas, so libraries should aim to maintain a presence here as well. Librarians could host a table day highlighting specific parts of a collection, such as Hein Online, Online Study Aids, or reference assistance for writing papers. Make the event even more special by providing snacks. For example, at Northern Kentucky University, the law library set up a popcorn machine to promote their library’s resources—it is amazing
how the smell of freshly made popcorn can bring in a crowd!

Similarly, some libraries use special dates, like National Library Week, to reach out to students. Drake University Law Library in Des Moines, Iowa, holds creative events including a “wheel of prizes” and a miniature golf course that gets set up in the student commons area. Libraries can host legal trivia or school-centered trivia contests as a way to lure students into the library. All of these events are designed to engage the students and remind them of the library’s usefulness and the many resources it provides.

**People, Not Robots**

The power of personal touch should not be overlooked. At Faulkner University Law Library in Montgomery, Alabama, the law library director recently provided sports equipment for check-out at the circulation desk, including soccer balls, Frisbees, and more. The director went a step further by going out once a week to the central yard to personally join with the students in some athletic fun. One unanticipated benefit of this initiative has been an influx in the number of students sitting one-on-one with a librarian and asking questions related to their research papers and homework.

Academic libraries often serve as research portals for alumni and the local bar. Some law libraries are providing continuing legal education (CLE) research refreshers. For example, Faulkner Law Library and the University of Wisconsin Law Library both provide CLE training for area attorneys. Faulkner advertises the CLE to all bar members, and even provides free registration to its alumni.

Academic law libraries are also reaching out to alumni and members of the bar by publishing research-oriented columns in local bar journals. For example, librarians at Northern Kentucky University’s Law Library write regular research columns for the Northern Kentucky Bar Association and the Cincinnati Bar Association’s monthly publications, the University of Louisville Law Library has a regular column in the Louisville Bar Association’s monthly journal, and the University of Wisconsin Law Library writes articles for InsideTrack, an online newsletter that goes to all members of the Wisconsin Bar.

Academics are not alone in facing these issues: firms and county law libraries can also benefit from a few of these out-of-the-box ideas to engage with their patron base.

**County Law Library Efforts**

Public law libraries must serve local attorneys as well as self-represented litigants. Reaching out to all of these patron groups requires a different approach. Collectively, the most popular way to reach out to the legal community seems to be through a newsletter. The Franklin County Law Library in Columbus, Ohio, sends out a monthly newsletter listing programs, new available resources, and articles of general interest. Feedback response shows readers’ appreciation in receiving only one email per month and enjoying newsletters they find visually appealing. Other libraries, including the Alameda County Law Library in Hayward, California, use various social media platforms such as podcasts, vodcasts, Facebook, Pinterest, Twitter, and Instagram to reach out to their patrons.

**Bringing Resources to Patrons**

Many libraries, including the Richmond Public Library in Richmond, Virginia, have found that going out into the legal community is an effective way to reach new patrons. For example, librarians can offer to speak at bar association committee meetings, or better yet, offer to host their meetings in the law library. The presentation you give can be catered to the group to whom you’re speaking. In addition to committee meetings, ask to speak at special events, such as Law Day or at annual meetings. In-house CLE programs on a variety of topics will also bring new attorneys into the library. The Harris County Law Library in Houston, Texas, reaches out to future attorneys and professionals by offering tours of the law library to students.

When reaching out to the self-represented litigants, community outreach seems to be most effective. Try partnering with a local legal aid group to offer classes or legal clinics on various topics, and arrange to have lawyers in the library at designated times for pro bono services. Several libraries, including both Oklahoma and Tulsa County Law Libraries, offer “lawyers in the library” programs with great success. Invite public librarians into the law library and explain what resources are available. Public library reference librarians get lots of legal questions and don’t always know where to refer patrons. Ask other public libraries if your law library can conduct programs at their locations.
Explore options to provide public libraries with legal resources of their own including a computer terminal dedicated to legal research. The Kane County Law Library in St. Charles, Illinois, recently began training public reference librarians on legal resources and receiving feedback from them on resources to purchase. Similarly, the Minnesota State Law Library has started loaning out its reference librarians to the public libraries. The librarians have scheduled hours to work at special reference desks that are set up within five local public libraries.

Most urban law libraries are in buildings where patrons must pay to park, pass through security, and then make their way through a maze of buildings to find—often out of the way—the law library. To alleviate confusion, a well-designed, user-friendly website can be most helpful. Links to forms, online legal research guides, and community agencies can bring your library to self-represented litigants in their own homes.

Lastly, don’t forget to celebrate events such as library anniversaries, community festivals, Law Day, and National Library Week. Lancaster County Law Library in Lancaster, Pennsylvania, holds trivia contests during Library Week with prizes; one of the most treasured prizes is money on patrons’ copy cards. It doesn’t cost the library anything and the patrons are thrilled.

**Law Firm Initiatives**

In many law firm libraries, attorneys are located nationwide, so working outside of the physical library space is the rule, rather than the exception. As a result, many law firms have multiple locations with up-to-date print collections, but only the main office has library staff on the premises. This makes outreach and breaking down the physical barriers of the library the reality of the job, as the vast majority of attorneys will never enter the physical library space.

A firm library can do several things to stay engaged with its attorney population electronically. Most firm libraries maintain a library portal on the firm’s intranet pages. These pages often contain links to not only the firm’s library catalog, but also direct links to non-billable electronic resources that the firm subscribes to (i.e., Lexis Advance, WestLaw Next, CCH IntelliConnect, etc.). They can also contain links to both practice group and state-specific resources. Links to internally created video tutorials that cover various resources the firm subscribes to can also be added. These intranet pages are also the perfect place to host in-house wikis for best practices and tips for researching specific subjects or using specific databases.

Another tool that is being frequently used is the creation of electronic resources. Librarians from Howard & Howard Attorneys PLLC-Chicago, Butzel Long, Reinhart Boerner Van Beuren, Porter Wright Morris & Arthur LLP, and Drummond Woodsum, reach out through monthly electronic newsletters that highlight new additions to the catalog, specific resources, or just general research tips and best practices. These newsletters not only assist the attorneys but also serve as a gentle reminder of the library and the services it offers.

Finally, also on the electronic front, the reference desk can be completely virtual. A central email address for the library can be used for all reference and research assistance requests. The “desk” can be covered during normal business hours by rotating librarians.

**Physical Outreach**

Physical outreach is equally as important and can be done in various ways. The library should be part of the onboarding process for all new and lateral hires, and it should participate in all new hire orientations. Many law firm libraries offer training on relevant library resources (this includes the annual Summer Associate class as well). Librarians can visit other offices to have one-on-one sessions with the attorneys to provide assistance and check in to make sure their research needs are being met. At Reinhart Boerner Van Beuren, Barclay Damon, LLP, Dilworth Paxson LLP, and Porter Wright Morris & Arthur LLP, librarians are present at practice group meetings, both when there are new resources to push and to maintain general awareness with the attorneys of relevant resources and services the library can provide.

Firm libraries, similar to their public and academic counterparts, are also using events such as National Library Week as a way to promote their services.

**Moving Forward**

As physical spaces shrink and patrons begin to research from their offices, homes, or local coffee shops, law libraries should continue to reach out beyond their physical walls to engage their patrons and showcase the vast resources the library has to offer.
The company’s automated legal research assistant, CARA, is helping users track down information they might otherwise have missed.

Inspired by the way the engineering community was using designated websites to share collective wisdom, litigator Jake Heller founded Casetext—a free common-law search engine featuring cases annotated by leading attorneys—in 2013.

The website wasn’t the company’s only goal. Pablo Arredondo, Casetext co-founder and vice president of legal research, and Heller also wanted to improve legal research tools by finding a way to leverage each individual piece of information lawyers come across in documents—an intent that inspired the company to create CARA, its automated legal research product.

CARA—which stands for Case Analysis Research Assistant—automates legal research through artificial intelligence (AI) and machine learning. After a brief is uploaded into the system, the tool returns in a matter of seconds a list of suggested cases that are highly relevant to, but not cited in, the document.

Each month, one million users access the product’s corresponding database, which is updated daily and contains more than 10 million cases, statutes, and regulations.

Since Casetext’s debut four years ago, the company has added more than 20 data scientists, engineers, and other employees and outgrown its initial location—Heller’s living room—and a workplace in Palo Alto, California. The company eventually settled into an office in San Francisco. CARA’s capabilities, too, have grown. In May, the tool was named the recipient of the 2017 American Association of Law Libraries (AALL) New Product Award, which honors offerings that enhance or improve existing law library services or procedures, or that improve access to legal information or the research process.

We recently spoke with Arredondo about the company’s early days, the role law librarians play in screening new technology, and what he thinks the legal technology industry’s future will look like.

How was CARA initially developed?

We realized that litigation matters encode a huge amount of information, and leveraging this information can create legal research
tools with unprecedented power and intuitive results.

[CARA involves] a mixture of using cutting-edge data science that’s applicable to data sets and what we call legal informatics—things specific to common law corpus and information that happens in litigation.

There are at least two distinctive types of information in a legal brief: the citation graph and the text of the brief itself. We call a brief’s unique citation graph a “citation fingerprint.” Cases are cited, and there’s a relative amount of discussion reported to each. This is a powerful piece of information. The second crucial piece of information is the text of the brief itself.

We had to spend a lot of time in our early years helping to create the database and building the infrastructure CARA works on top of. There was an opportunity to put a lot of cool things in: annotations in the margin and the ability to integrate law firm marketing materials by giving each firm a homepage where its logo appears.

How did you come up with CARA’s name?
We didn’t hire branding or marketing folks to test a lot of different names. We came up with sort of an acronym and fell in love with it. Personalizing it was part of what we wanted it to be: a distinct name people would easily remember and think about.

What value proposition does the product offer legal industry members?
Generally, there are two major values. The first is you can find things you’ve missed. We’ve had attorneys tell us they spent a lot of time doing research for a brief, and CARA, in seconds, found a case they overlooked. [One] thing we hear consistently is, “I thought I was done, but I wasn’t. CARA helped me improve quality.” To my mind, that’s the gold standard.

The other key value is efficiency. If someone is using an opponent’s brief, there are cases the opponent tends to leave out; that’s a product of our adversarial system. You can take an opponent’s brief, drag and drop it into CARA, and [get] briefs that are relevant to the opposing counsel’s briefs you can cite.

CARA does things that humans using traditional tools—by that I mean Westlaw and LexisNexis—can’t. It’s not something where putting more hours in with traditional research would reproduce the functionality. CARA doesn’t replace Westlaw or LexisNexis; it’s a supplemental tool, but it’s a very powerful one. The most consistent feedback we’ve gotten—the most important you can get—is, “This brings something new to the table. This adds functionality we don’t already have.”

How did you initially spread the word about CARA?
We’re so grateful to AALL. In our earliest days, I demoed it in Chicago at the 2016 AALL Annual Meeting & Conference at the Cool Tools Café. Even prior to the formal launch, we
talked to 3 Geeks and a Law Blog editor Greg Lambert about it, and Dewey B Strategic editor Jean P. O'Grady shared the demo very early on, which helped get it out through their beloved, widely read blogs. Bob Ambrogi’s widely read blog was another channel to get the word out.

People started to reach out to folks and spread the word that way. In a parallel world, we decided to make the tool completely free for the judiciary. We were happy to see courts signing up for free. One of the powerful things about CARA is it’s agnostic to what you’re litigating. It works with anti-trust briefs just as well as patent briefs.

How has the product changed since its release?

One of the first things we added was jurisdiction filters. Even though CARA organically tends to return cases from the relevant jurisdictions, attorneys often want to filter it, so they’re only looking at one jurisdiction.

We also added the ability to take all the power CARA has with briefs and use keywords on top of that. It’s really useful. If you have a specific issue, you can use that combination to great effect. Just last week, we added something new: CARA now returns relevant legal briefs, as well as case law—something our users are very excited about and have been asking for.

Who uses CARA most?

Attorneys are definitely our biggest users. Judiciary members and clerks are starting to give them a run for their money, but it’s primarily used by litigators. The thing with CARA is, because it does things that traditional tools don’t, even top law firms have a lot of researchers using it. Certainly, for smaller firms and solo firms, CARA is also a very powerful way to level the playing field, if you will. Within seconds, it will give you case law that might have taken hours to find.

How are law librarians using it?

It’s interesting—at different firms, law librarians play different roles, in terms of litigation and the legal research process. Certainly, for a tech provider to just get in the door with firms, it’s important for law librarians to take the time to review it. One of their important roles is to vet technology. Law librarians play an important gatekeeper role. They separate the wheat from the chaff; they look at the plausibility of adding something for attorneys. There are a lot of people building stuff out there, and it’s important not to waste attorneys’ time with technology that’s not adding any value.

We’ve been really happy with how many law librarians facilitate getting the tool into attorneys’ hands. One of the primary ways they’re using it is to help with setting motions for trial. Some law librarians are given drafts to look at to see if anything was missed.

Lawyers, as a whole, have not been early, eager adopters of technology. CARA is so easy to use, there’s not much training involved. The output is something lawyers are so familiar with in their workflow—which cases they should read—that we’ve found that adoption is actually pretty good, if attorneys are willing to try it.

Has the emphasis on efficiency, which has been a focus in the legal industry since the Great Recession, influenced Casetext’s development?

Efficiency is a huge part of what is driving legal innovation. But it is equally important to increase, at the same time, the quality of work that’s done. You want to research efficiently, but you can’t miss good cases.

Any result on CARA links to a full-text database. One of the things that’s quite useful is a heat map that lets you quickly navigate to the part of the case that’s discussed or cited most. There’s a quick-find option users are quite fond of. We’re annotating cases in a number of different ways, including integrating analysis written by lawyers, and also by extracting a judicial summary for a case and putting it at the top.

What future changes do you anticipate for both Casetext and the legal industry as a whole?

We’re doing a lot of outgoing user research. We have one colleague who is dedicated full time to user research. That’s a valuable part of everything we do; it certainly helps us prioritize what order to do things in.

In 10 years, the landscape should look much better. The tools attorneys use should be much more intuitive and context specific. The fact that an attorney is working on a given type of matter should matter. It’s something that should be reflected across the entire information environment.

I’m thrilled to see the incredible innovation, venture capital funding, and general attention the field has received in recent years. It’s a really exciting time for legal technology and research, which translates to it being an exciting time for the legal profession.

As a diversity of tools come out, each with different capabilities and limitations, that’s another area where law librarians are crucial. Both law librarians and law schools must not only educate aspiring attorneys on these tools, but also on how to evaluate the tools that will come out tomorrow.
More and more, institutions, firms, and stakeholders are looking for librarians to show them the value of library services. You might think you’ve been gathering the correct data all along, but is the data being collected really speaking to your institution’s bottom line? To begin, start by determining which data is vital to the organization and ask your stakeholders what types of metrics would be helpful. Only then can you begin to change your metrics data collection to match the needs of your institution, firm, and stakeholders.
I’ve been asked once again, it seems, to prove the value of library services to our firm. This isn’t the first time I’ve been down this road. I’m the director of a law firm library that services slightly more than 200 attorneys. The firm has a strong regional presence and several out-of-state satellite offices. Over the past several years, my staff and I have conducted a collection audit, implemented a new online catalog, embedded ourselves in and regularly attended practice group meetings, and evaluated and coordinated training on new products and platforms. I personally met with the firm’s executive director once a month and also submitted a monthly report. Recently, he has asked that I begin to provide him with more measurable evidence of the library’s contributions. He requested that I start tracking metrics. In my opinion, I’ve been doing this. We record the number of reference questions, the number and types of items being circulated, and the number and types of items we request through interlibrary loan. Do you have any suggestions?

First of all, it appears that you’ve already been doing a good job of communicating the value of your department’s services by your monthly meetings with the executive director and the presence of your staff at practice group meetings. So continue doing what you’ve been doing. “Metrics” is, as they say, currently trending. It may be that your executive director doesn’t know exactly what metrics are, or more likely, doesn’t perceive the statistics that you’ve been reporting to be as useful as they could be.

For years, librarians have kept track of the number of patrons in the library, the number of reference questions, the number of books circulated, etc. Frequently, librarians have failed to analyze and utilize the statistics that they have kept. I began my career as a public library reference librarian. We kept many of the statistics I just referenced. One day, the assistant director for public services asked my supervisor and me how we were using the statistics. For example, were we using them to aid with staffing the reference desk or to justify the hours in which the library was open? I’m afraid that we stared back at her blankly. We had never taken the time to reexamine our reasons for tracking certain types of information.

I am also pretty sure that we have all evolved past tracking statistics just of out of habit, especially as we scrutinize our bottom line. However, we librarians still struggle with being identified as integral team members who contribute to the successful practice of law, rather than as simply individuals who perform a necessary administrative function. The practice of law has transitioned from a calling to a business model, and the results have affected all of the components within a firm. There is both more interdependence and competition between departments. One of the drivers includes advances in technology that have encouraged information vendors to move their services onto an internet platform. This has affected both efficiency and costs, and has resulted in shrinkage of library real estate. Bigger firms are moving away from leveraging large classes of associates and are instead hiring laterals who have established a book of business that complements firm practices, or that fills in the gaps. Younger attorneys are perceived as more self-sufficient, especially with regard to research skills. In addition, clients are demanding more transparency and accountability.

Although law firm librarians may have been among the first to fall under scrutiny, even court, government, and academic law librarians are being asked to defend their value. We are all, collectively, looking at the bottom line. Whether we track statistics, vet products and services, or partner with other departments, we are most successful when we have aligned our initiatives and accomplishments with the missions of our organizations and have satisfied the needs of our clients. Before your next meeting with the executive director, seek input from your staff and take the time to reflect on the statistics that you are tracking now, and determine whether it is still necessary to...
do so or if they could be better used. Try to determine how these statistics can be used to help further your organization’s mission. I emphasize the concept “try” because until you meet with the executive director and work together, you may not have as full an understanding of the firm’s long-range strategy as you believe you have.

Whether you’ve been tracking statistics or are about to begin doing so, be prepared to periodically reassess your efforts. Likewise, continually update your executive director on what’s working and what isn’t. I frequently brag that the best resource we have is each other. For example, there are members of the Private Law Librarians & Information Professionals Special Interest Section who are working with metrics, and they have produced, over the last few years, several programs and webinars on the topic. As a starting point, I suggest you review an article from the March 2016 issue of AALL’s Technical Services Law Librarian titled, “Learn to Show Your Value to Leadership: A Guided Tour Through the Wonderful World of Metrics, Law Firm Edition.” (View the article at bit.ly/SO17TSSIS.)

It seems as if you’re off to a strong start. You have a mechanism in place for communication and you’re aware of what needs to be done. Pace yourself, and don’t try to do everything at once. Good luck.

Best Wishes, Moving Forward

It isn’t quite summer as I write what will be my last “Reference Desk” column, yet it will be almost fall by the time you read it. The musical duo Chad & Jeremy’s version of “A Summer Song”* is ringing through the brain of this Baby Boomer. I can’t dismiss it, so I’ve given into it:

*They say that all good things must end someday
Autumn leaves must fall
But don’t you know that it hurts me so
To say goodbye to you…

So, I won’t say goodbye. I told AALL Spectrum’s editorial director Kris Niedringhaus and AALL publications manager Heather Haemker that I will be here as long as you need me or as long as I can be of help. It has been a full and rewarding season for me since I began writing the “Reference Desk.” Almost seven years ago, Mark Estes, then editorial director of AALL Spectrum, asked if I would write a professional advice column. He was acting on the suggestion of an association member who thought such a column was needed. I was flattered and humbled. Mark promised me his support as well as that of the Association. He was true to his word. Not only have I had the privilege of working with him, Catherine Lemmer, Kris, Heather, Ashley St. John, Cara Schillinger, and others, but I feel that I’ve become friends with each of them.

Together, Mark and I chose a title for the column. Over the years, I have addressed many library workplace topics, such as diversity, depression, succession planning, and outsourcing. It has been a pleasure to have highlighted the resources of our Association and the wisdom of our members. I have often relied upon the kindness and generosity of colleagues, both from within and outside our Association, to provide the needed expertise and advice. I have been fortunate. No one has ever refused to help, and I believe that their contributions have made the column more relevant than any one person could have done alone. In addition, I believe that together, we have created a column that belongs to the Association. I believe that was the reason I was honored as “Best Blogger/Writer of the Year” by the Private Law Librarians & Information Professionals Special Interest Section.

Although I expect this to be the last “Reference Desk” column that I write, I don’t believe this is goodbye. A couple of years ago, Sally Holterhoff and I coordinated a program that emphasized the importance of knowledge transfer and succession planning. Already there are plans to transition this column, and I hope it continues to draw upon the collective knowledge of our Association. I am privileged to have been a part of this.

Thank you,
Susan Catterall

“A Summer Song” was written by Chad Steward, Clive Metcalfe, and Keith Noble with contributions by Jeremy Clyde.

AALL would like to thank Susan for her long and committed service to the AALL membership through her column. Her willingness to give so much of her time to her colleagues and profession is exemplary. Thank you, Susan.
COMPETITIVE INTELLIGENCE FOUNDATIONS
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TOPICS
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FACULTY
Zena Applebaum is the director of professional firm customer segments with Thomson Reuters in Canada. In her role, Zena has primary responsibility for voice of the client feedback, client intelligence, market and competitor performance analysis, and being fearless within the segment. A regular speaker, writer, and blogger on CI and other change management topics in professional service firms, Zena is a data junkie who revels in the possibilities of data to connect people, places, and things. Zena can be reached at @ZAppleCI.

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From the superb educational programming, an expansive exhibit hall, and countless networking opportunities, to phenomenal keynote speaker Bryan Stevenson and our first-ever Innovation Tournament (sponsored by Bloomberg Law), which saw finalists present their innovation plans to a rapt audience and a panel of judges, the 110th AALL Annual Meeting & Conference soared above and beyond the status quo. Below are some of our favorite moments.

(1) **CONELL:** Held every year to welcome newer members, introducing them to AALL and its leaders; (2) **Opening General Session:** Keynote speaker Bryan Stevenson recounted his experiences defending some of America’s most vulnerable people, which brought the house down, and then brought people to their feet; (3) **Association Luncheon:** Colleagues came together to honor AALL members for their outstanding contributions to law librarianship; (4) **AALL’s Member Services Pavilion:** Attendees chatted with colleagues and learned about upcoming Association initiatives; (5) **Exhibit Hall:** Attendees chatted with 80+ exhibitors to learn about the latest products and innovations; (6) **Innovation Tournament:** Winners were awarded $2,500 each to implement their innovations. Congratulations to: Judges Choice Winner: Katherine Lowry (Attorney-Facing Chatbot), and Audience Choice Winner: Jennifer Wondracek (Virtual Reality Lab with Public Speaking Apps).

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