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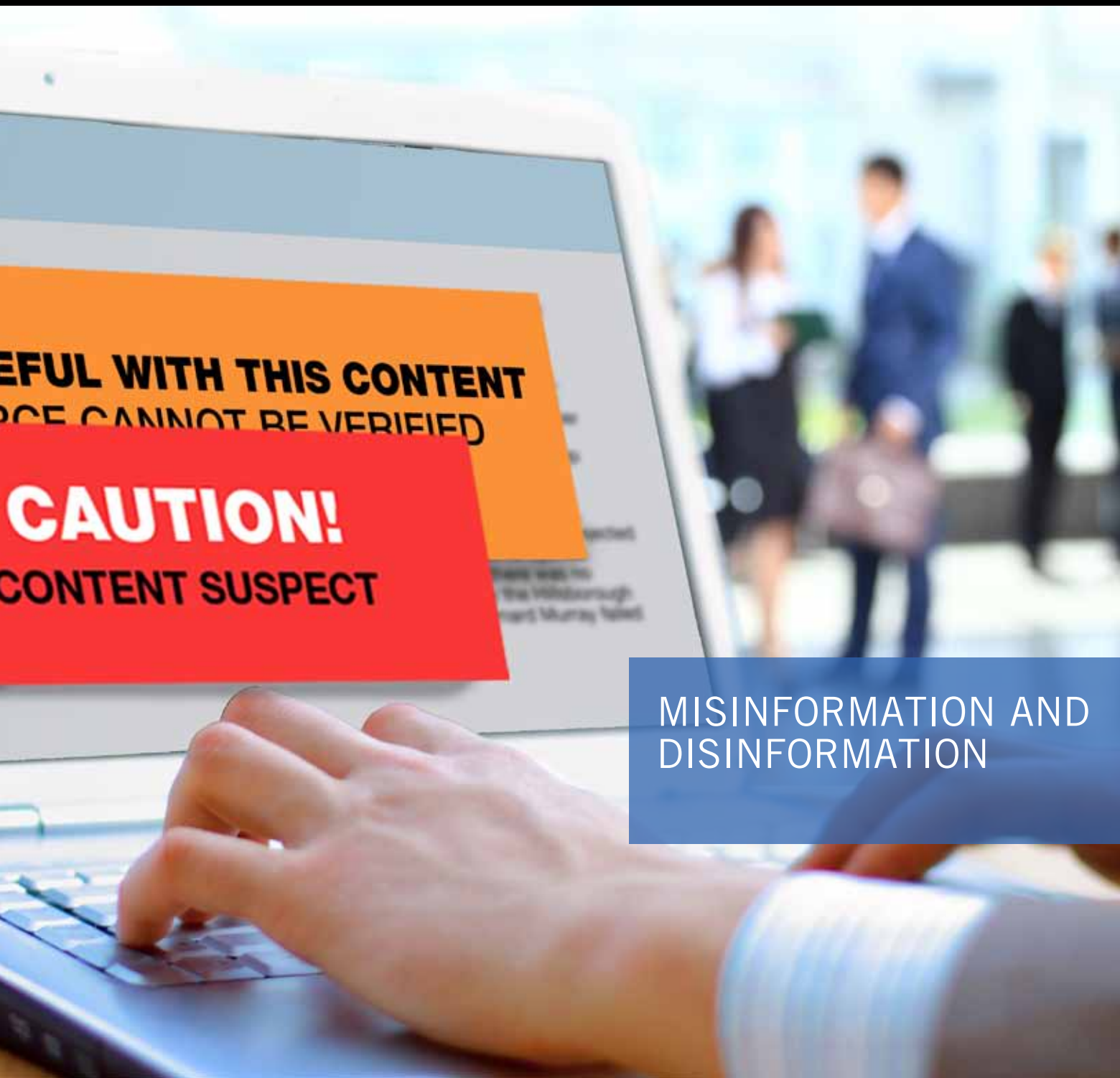
THE MAGAZINE OF THE SPECIAL LIBRARIES ASSOCIATION



MISINFORMATION AND DISINFORMATION

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THE MAGAZINE OF THE SPECIAL LIBRARIES ASSOCIATION

Misinformation and Disinformation

Technology can help identify suspect news, but librarians need to actively teach information literacy and other awareness strategies.

BY STUART HALES

As hoaxes go, the Cardiff Giant was huge. About 10 feet tall, made of stone, it was unearthed in October 1869 by workers digging a well behind a barn in Cardiff, New York. Some speculated that it was a petrified man, but it was actually the creation of a New York tobacconist who wanted to make fun of people who took the Bible literally—including a passage in Genesis mentioning that giants had once roamed the earth.

Perhaps the most intriguing aspect of the Cardiff Giant hoax was that people kept traveling to see it even *after* it was revealed as a fake. Its enduring popularity even prompted the showman P.T. Barnum to offer $60,000 to lease it for three months. When his offer was rejected, Barnum paid an artist to sculp a plaster replica, which soon became an even bigger attraction than the original.

Today, the Cardiff Giant is still on display, but you don't need to travel to New York to experience deception. Hoaxes, misinformation, and disinformation are as old as nature itself and seem to be growing more common, thanks largely to social media. "Fake" news that used to take weeks or days to spread now takes only minutes, and the technology that enables such widespread dissemination also makes it easier to create it in the first place.

Librarians, long seen as keepers of facts, have found themselves caught in the cross-hairs of the fight to counter misinformation and disinformation. And as this issue of *Information Outlook* makes clear, winning that fight will require patience, tenacity, allies (both human and "artificial"), and a little bit of compassion and understanding. Here's a sample of what's in this issue:

"Misinformation and disinformation are prevalent on social media—it has been reported that fake news can outperform real news in terms of shares, likes, and comments on social media (Price 2016). Unfortunately, misinformation and disinformation can also be found in scholarly journals. The most astonishing examples are probably articles with totally made-up data."

—Xiaotian Chen, "Information Professionals versus Misinformation in Scholarly Journals"

"What's wrong with expert-curated blacklists? Nothing, in theory. Even the most basic plug-in serves as a useful alarm bell. But every librarian knows that determining whether a given article is trustworthy goes beyond checking the source website."

—Darcy Gervasio, "Apps, AI, and Automated Fake News Detection"

"Sadly, visual literacy education is largely undervalued. Over the years, visual arts education has also decreased in frequency in K-12 education. As a result, many librarians (and their constituents) do not have a strong background in visual literacy."

—Lesley Farmer, "Visualizing Fake News"

"PIL research from 2016 found that recent graduates felt unprepared to develop questions of their own, and a 2012 study found that employers were frustrated by new employees' reliance on superficial Internet searches. Learning how to develop professionally focused personal learning networks and a means for keeping up with career-relevant news is a service that librarians might provide recent graduates early in their professional lives."

—Barbara Fister, "College Students as News Consumers"

"We should call out misinformation and disinformation clearly and emphatically. We're duty bound to do it. But maybe we don't always need to take along our swords to cut down those spreading untruths—maybe, sometimes, we need to take our lamps to guide them."

—Jennifer Graffunder, "Why Lie? Human Motivations for Misinformation"

"I have gone to work almost every day of my career not knowing exactly what areas of information I will be involved with. I think that's probably what makes a lot of our jobs interesting. I have never wanted to be stuck doing one thing or conducting research within the same area, but then, doing what we do, those kinds of jobs have never really existed."

—Deb Rash, "Seeking Challenge and Variety"

"In early 2018, [we] conducted an assessment project to explore the impact of library support and services for American University students, faculty, and staff in the Kogod School of Business and School of Public Affairs . . . The focus of the survey was the following question: Can you think of a time that the library's staff, services, spaces, or resources had a positive impact on your academic work?"

— Amanda Click and Olivia Ivey, "Building an Impact Narrative"

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Information Professionals versus Misinformation in Scholarly Journals

PUBLISHING ARTICLES FOR FAKE SCHOLARLY JOURNALS HAS BECOME A BOOMING BUSINESS IN CHINA, AND INFORMATION PROFESSIONALS MUST TAKE STEPS TO IDENTIFY SUCH ARTICLES TO BETTER SERVE THEIR CUSTOMERS.

BY XIAOTIAN CHEN, MLS, MA

Misinformation and disinformation are prevalent on social media—it has been reported that fake news can outperform real news in terms of shares, likes, and comments on social media (Price 2016). Unfortunately, misinformation and disinformation can also be found in scholarly journals.

There are various kinds of misinformation that librarians can help readers detect in journals that appear to be peer-reviewed. The most astonishing examples are probably articles with totally made-up data.

For example, John McCool, founder and senior scientific editor at Precision Scientific Editing, reported in 2017 that he received an invitation to write an article for *Urology & Nephrology Open Access Journal*. Although he does not work in the field of medicine, he accepted the invitation and wrote a fictional case report about a man who developed uromycitisis poisoning. He based the piece on an episode of the situation comedy "Seinfeld" that aired in 1991 in the United States. He used Dr. Martin van Nostrand, a Seinfeld character, as the author's name, opened an e-mail account for Dr. van Nostrand, and created a fake author affiliation called Arthur Vandelay Urological Research Institute. His made-up article was accepted for publication, with minor revisions recommended.

Articles of this type can be published in different kinds of journals. Following are several steps librarians can take to help readers identify them:

Consult journal blacklists and whitelists. There are two blacklists, primarily for open access journals. One, Beall's List of Predatory Journals and Publishers (https://beallslist.weebly.com/), is free; the other, Cabell's Blacklist, is subscription-based. I recommend that libraries subscribe to Cabell's Blacklist, which is not expensive. Beall's List was once shut down and it is now maintained by an anonymous individual.

Whitelists can include free and subscription-based resources. For example, DOAJ (Directory of Open Access Journals) can be considered a whitelist for OA journals, as can PubMed Central. Some journal indexes are not freely accessible, but their sources (journal lists, such as the Web of Science journals list and Scopus journals list) are usually free. The journal in which the Seinfeld-themed article appeared, *Urology & Nephrology Open Access Journal*, is listed by Cabell's Blacklist, and its publisher, MedCrave Group, is listed by Beall's List. The journal is not on whitelists.

Check authors' e-mails and affiliations. While following the above step is simple, it is not fail-safe—some made-up articles can be successfully published in journals on whitelists. For that reason, I also recommend checking out

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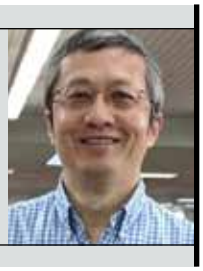

authors and their e-mail addresses. If authors use private e-mail accounts instead of the e-mail of their institutional affiliations, that might be cause for alarm.

For example, in April 2017, Springer Publishing retracted 107 articles published in *Tumor Biology*, a then-Web-of-Science-indexed journal. These articles used fabricated data, with some of them being created by so-called "paper mills" and most submitted by paper mills with fake peer reviews (Liu and Chen 2018). The paper mills managed to successfully submit the articles because *Tumor Biology* allowed them to send private e-mails from accounts they created with the names of reviewers. *Tumor Biology* also accepted authors' e-mails from their private accounts.

Paper mills manufacture articles for authors who pay them to do so. Private e-mail accounts make it much easier for paper mills to operate on behalf of authors and send fake reviews as well as fake articles. To see how this works, read *Tumor Biology's* retraction announcement at https://link.springer.com/article/10.1007/s13277-017-5487-6. The authors' e-mails are from 126.com, 163.com, and other companies that offer private e-mail services. For example, the three authors of the article listed at the top of the retraction list are affiliated with Central South University in China, but the corresponding e-mail address is ouyangch0@126.com rather than a Central South University e-mail address.

Follow retraction information. In addition to the retraction news issued by usual news channels such as publishers' retraction announcements, *Nature and Science News*, and professional listservs, the Retraction Watch website (https://retractionwatch.com/) and its tweets could be good sources for major retraction updates.

There are other steps you may want to take as well. A zoology professor and an information science professor at the University of Washington developed a course titled Calling Bullshit: Data Reasoning in a Digital World (see its syllabus at https://callingbullshit.org/syllabus.html) that addresses questions such as "How can you know if a paper is legit?" Their website offers some tips for identifying fake articles, one of which is to ask if the level of claims made by the article are commensurate with the integrity of the venue (journal).

Huang (2017) found that, during the years 2012-2016, China published more scientific research with fabricated peer reviews than all other countries put together.

Sponsored Content

Aside from fabricated articles, there are paid supplement "articles" that do not go through the same peer-review process as regular articles in the same journal. These may not be fraudulent, but they may well be substandard.

I once received an inquiry from a library patron who could not locate an article from *Science*, one of the most reputable scientific journals. The title of the article was "Using internal combustion engine waste heat can increase efficiency, lower fuel consumption, and reduce CO_2 emissions," and its EBSCOhost metadata included the following: "*Science*. 12/19/2014, Vol. 346 Issue 6216, pp. 27–32. 6p." The article turned out to be one of 20 "sponsored" articles published in the advertising section of *Science*, which was prefaced by a disclaimer that read as follows: "Materials that appear in this booklet were not reviewed or assessed by the *Science* editorial staff."

Although these sponsored articles may not necessarily use falsified or fabricated data, the *Science* editorial note raises concerns about their quality. I opened a trouble ticket with EBSCOhost, and EBSCOhost removed records of these paid supplement articles from their database.

It is certainly not a new phenomenon for scholarly journals to publish fraudulent articles. Judson (2004) listed cases of research misconduct throughout Western history in his book, *The Great Betrayal: Fraud in Science*. However, there are some new factors in play in this ongoing issue, one of which is open access (OA) journals. This is not to suggest that traditional journals publish fewer questionable articles than OA journals, but there is no disputing that the OA publishing model (charging authors an article processing charge, or APC, instead of charging readers) places pressure on a journal to accept more articles for publication to generate more revenue.

The other two new factors are related to China: (1) generous monetary rewards for publication and (2) paper mills. Just as China's economy is growing fast, so, too, is its output of scientific articles. Quan et al. (2017) found that all Chinese universities offer financial rewards for publishing, ranging from USD 30 to USD 165,000 per article, depending on the prestige of the journal. That suggests that scientific publishing in China is more policy driven than research driven. Huang (2017) found that, during the years 2012-2016, China published more scientific research with fabricated peer reviews than all other countries put together.

Possibly due to the monetary reward and/or other reasons, paper mill publishing of articles for scholarly journals has become a booming business in China. As mentioned earlier, most of the 107 articles retracted by *Tumor Biology* were submitted by paper mills in China.

The presence of these paper mills, as well as other new factors, is likely to fuel the creation of more articles with fabricated, falsified, or plagiarized information. Information professionals should be vigilant about this trend and implement various tactics to identify fake research articles in order to better serve readers. **SLA**

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College Students as News Consumers

LIBRARIANS WORKING WITH RECENT COLLEGE GRADUATES CAN HELP THEM DEVELOP CURRENT AWARENESS STRATEGIES AND PERSONAL LEARNING NETWORKS THAT WILL SERVE THEM THROUGHOUT THEIR CAREERS.

BY BARBARA FISTER, MLIS

How do college students keep up with news? How much do they rely on social media to find out what's happening? Can they tell solid reporting from misinformation, hype, or fabricated hoaxes?

These are questions that Alison J. Head and her research team at Project Information Literacy (PIL) set out to explore in a year-long study on young news consumers (the study report, published last year, is available at https://www.projectinfolit.org/news_study.html). Over the past decade, PIL has been the premier source of in-depth basic research into how college students use information. PIL studies have addressed topics such as how first-year students learn the ropes of college research, how recent graduates manage information in the workplace, how course assignments describe research tasks, and how libraries design spaces for learning.

At a time when public trust in news media is at an all-time low and concern about "fake news" is high, many librarians are seeking ways to help their communities sort truth from misinformation and disinformation. It seemed only natural, then, for PIL to find out what information skills and habits college students employ when it comes to news consumption—and whether the information literacy skills students learn in college transfer to the volatile realm of understanding news today.

With funding from the Knight Foundation and the Association of College and Research Libraries, the PIL research team set out to survey nearly 6,000 students enrolled at 11 universities chosen to be representative in terms of political geography and demographics. To round out the survey data, 37 telephone interviews were conducted and some 1,600 open-ended survey responses were coded. Finally, more than 700 students shared their Twitter handle so a computational analysis could be made of their news-sharing behaviors, validated with data from a larger national panel of 135,000 college-age Twitter users.

The Social Life of News

In gathering and analyzing all of that data, PIL learned some good news, uncovered some surprises, and discovered some areas of concern. One surprise: To a greater degree than in earlier media studies, students in PIL's study kept up with news. In fact, they feel peer pressure to be informed—more than 90 percent get their news from peers, either face-to-face or, more often, through social media. As one student put it, "news finds me through alerts on my phone and on social media."

Only a tiny percentage (1.6 percent) reported they did not get news from social media. Facebook was prominent in responses, but Instagram, Snapchat, and YouTube were also used at least weekly as a news source by at least half

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of the students surveyed. (Interestingly, among the youngest students in the survey, Snapchat ruled, especially among a small sample of high school seniors surveyed by PIL for the sake of comparison. Nearly half picked up news at least weekly from Snapchat, while Twitter was used as a daily news source by close to a third of respondents. Nearly two-thirds of students got their news from as many as three social platforms.)

But students didn't stop there. Newspaper websites were tapped by three-quarters of students, and 70 percent reported they discussed news with their professors. Students majoring in the humanities, social sciences, and business were most likely to discuss news in their courses or one-on-one with their teachers; STEM majors were less likely to do so, but nearly half heard about news from their professors, especially if it related to their field.

Altogether, students had a broad definition of what constitutes "news" and took a multi-modal approach to keeping up with current events that even embraced political memes, which 82 percent of students engaged with weekly or more often. Humor, for many, was a good way to gain context and to humanize events that might otherwise feel overwhelming.

Another finding of the study: Not only are students interested in keeping up with news, they value the traditional role of journalism in society. Eighty-two percent agreed that "news is necessary in a democracy," and 63 percent said they believe that following news is a civic responsibility. However, confidence in those values was not matched by confidence in the way news is reported.

Coping with Overload and Doubt

While students said traditional journalistic values matter, they frequently expressed doubt that news organizations lived up to them. The respect they expressed for journalism as an institution was often clouded by cynicism.

Distinguishing fake news or disinformation from reliable news reporting was also a significant challenge. Slightly more than half of survey respondents did not have confidence they could recognize fake news, and more than a third agreed that fake news had made them distrust the credibility of *all* news. "It is really hard to know what is real in today's society," one student said. "There are a lot of news sources, and it is difficult to trust any of them."

Another challenge for students was the volume and speed of news. More than two-thirds of the respondents said the sheer amount of news was overwhelming. As one disgruntled student put it, "News just throws itself at you. I don't try to follow the news at all, but it still throws its ugly self into my face on the daily."

Like all news consumers, students were selective, paying the most attention to news that mattered to them and reflected their immediate needs and concerns. Immigration issues were frequently mentioned as a topic of interest because students knew people whose citizenship status was at stake. Others were galvanized by the Parkland school shooting and subsequent student activism, having grown up with active shooter drills. Many paid particular attention to news related to their major, a sign they were beginning to develop current awareness strategies that might help them in their careers.

These emerging strategies for managing the volume of news are particularly intriguing when drilling down into open comments in the survey and follow-up interviews. When looking for information to complete school assignments, students typically filtered their search results using strict parameters set by their professors—sources must come from scholarly publications in a library database or from a select group of reputable news sources. But students were less inclined to evaluate sources carefully for their own use. As one student put it, "When I look at news for my personal life, I am less likely to be concerned if the site is credible or not."

Many students reported they were developing their own approaches to filtering and screening to make information flows manageable and more likely to match their personal interests. They described using a digest such as *The Skimm* or the Apple News app to quickly browse headlines so they would be able to keep up. If something caught their interest, they compared multiple news sources to get more information and ensure they weren't being misled by a biased source.

Implications for Special Librarians

This large mixed-methods study shows that college students are interested in news. They discuss current events in their courses and with their friends; many develop their own coping mechanisms for screening and filtering the flow of news on a daily basis. They value the role of journalism in society and feel it is their civic duty to keep up with current events.

Yet, in spite of the ubiquity of information literacy instruction programs in academia, libraries and librarians played little or no role in students' news habits or in their ability to distinguish reliable news from misinformation or disinformation. Strategies that students described for evaluating sources for their coursework generally didn't transfer into sorting good journalism from disinformation. And only a tiny percentage of students ever discussed news with a librarian.

This should concern academic librarians who feel information literacy is a key component of lifelong learning. But it also has implications for librarians who work with recent graduates and support the work of scientists, policy makers, businesses, or cultural institutions.

Librarians working with recent graduates may find that new employees need help developing current awareness strategies and personal learning networks. Indeed, PIL research from 2016 found that recent graduates felt unprepared to develop questions of their own,

SLA 2019: Diversity Starts at the Top!

SLA Annual Conferences are known for the diversity of their attendees and the topics they discuss—everything from new technologies to leadership and management strategies to communicating value. At SLA 2019, diversity will also be evident in the keynote presentations: A "kindness guru," a panel of library school deans, and the author of a best-selling book on racist and sexist algorithmic bias in commercial search engines will headline the general sessions.

Leon Logothetis, a broker turned-adventurer who wrote a book titled *Amazing Adventures of a Nobody* and hosted a National Geographic travel series of the same name, will speak at the opening keynote session on Sunday, June 16. His latest book, *Go Be Kind*, builds on his Netflix series "The Kindness Diaries" by describing a series of daily adventures—treasure hunts, dream dates, awkward moments, and the like—that are intended to help readers rediscover the "gift" of kindness and lead them to a happier and more rewarding life.

The keynote session on Monday, June 17, will take the form of a panel discussion on the future of the information profession and the skills that info pros will need to help organizations navigate the digital revolution. SLA President Hal Kirkwood will moderate the discussion; joining him will be deans of three schools of library and information science:

- **Kendra Albright**, Kent State University;
- **John Gant**, North Carolina Central University; and
- **Sandra Hirsh**, San Jose State University.

Safiya Noble, an associate professor at UCLA, visiting assistant professor at the University of Southern California, and the author of *Algorithms of Oppression: How Search Engines Reinforce Racism*, will speak at the closing keynote session, on Tuesday, June 18. Her academic research focuses on the design of digital media platforms on the Internet and their impact on issues of race, gender, culture, and technology.

and a 2012 study found that employers were frustrated by new employees' reliance on superficial Internet searches. Learning how to develop professionally focused personal learning networks and a means for keeping up with career-relevant news is a service that librarians might provide recent graduates early in their professional lives.

Further, librarians working in special libraries may also be well positioned to help their communities combat misinformation and disinformation by highlighting ways their organization could guide local citizens toward good sources of information about science, health, public policy, or any other topic that relates to their organizational mission. If a goal of information literacy is to support lifelong learning, librarians who work with people in all stages of life have much to contribute, especially in these turbulent times. **SLA**

Apps, AI, and Automated Fake News Detection

LIBRARIANS SHOULD KNOW WHAT AUTOMATED DETECTION TOOLS CAN AND CANNOT DO TO FLAG MISINFORMATION, AND THEY SHOULD PROMOTE AND TEACH INFORMATION LITERACY WHENEVER POSSIBLE.

BY DARCY GERVASIO, MLIS

In January 2017, when I teamed up with journalism faculty at SUNY Purchase College for our first fake news "teach-in," we strove to give students concrete strategies for fighting the spread of false information. At the time, journalists and academic librarians were focused on teaching users to *identify* fake news (and making so many libguides!). I wanted to empower disenchanted undergrads to take small, proactive *actions*, like flagging fake articles on social media, donating to legitimate news organizations, and installing fake news detection browser extensions.

These extensions (apps) seemed cutting-edge and popular with students, and it's easy to see why. A plug-in that automatically fact-checks search results and news feeds relieves the mental load of having to critically examine thousands of posts each day—plus, users don't have to stop what they're doing to deliberately visit a third-party website like Snopes or Politifact.

Apps seemed like a modern, proactive solution, but the more I recommended them, the more I questioned how they work and what level of human intervention is involved. In this article, I dive into the literature to give librarians a primer on the current state of fake news detection technology—and reveal how (un)automated many apps actually are.

It's All About the Apps

Since 2016, fake news apps have proliferated, with newsrooms (e.g., ThisIsFake by Slate), nonprofit centers for journalism (e.g., CrossCheck by First Draft), for-profit cybersecurity startups (e.g., CheckThis by Metacert), college students (e.g., Project FiB from a hackathon at Princeton), and concerned-citizen-coders (e.g., B.S. Detector and Fake News Detector) getting in on the action. Tech giants like Google, Microsoft, and Facebook have announced partnerships with journalists and programmers and filed patents for tools to address the fake news crisis (Lee 2019; Jackson 2016; Newton 2016).

Yet, despite many small tweaks,[1] we are still waiting for comprehensive solutions. In August 2018, Microsoft launched NewsGuard, the first fake news plug-in to come standard with the Edge browser on all Android OS devices (Lapowsky 2018; Warren 2019). NewsGuard flags news within search results and social media and provides a "nutrition label" indicating how trustworthy or biased the website is.

But here's the secret: NewsGuard, along with most "automatic" fake news detection apps, is barely automated at all. Rather than using AI to examine the actual content of posts or the complex ways they spread, most detection apps on the market today rely on simple keyword matching to check domains against a human-curated blacklist of

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Fake News Detection Tools by Type

Web platforms for crowd-sourced fact-checking/flagging:

- CrossCheck
- ClimateFeedback.org
- Fiskkit
- Hypothes.is

Browser extensions that rely on curated blacklists:

- B.S. Detector
- Fake News Detector (hybrid)
- NewsGuard
- Project FiB (uses domain and text keyword-matching to "verify" posts against other online sources; does not use a learning algorithm)
- ThisIsFake (defunct)

Browser extensions that rely on learning algorithms (computational prediction):

- CheckThis
- Factmata
- Fake News Detector (hybrid)
- Hoaxy (web platform, not an extension)

"fake" or "suspicious" websites. In fact, the only commercially available browser plug-ins I found that use learning algorithms to analyze characteristics of fake news, rather than simply matching articles against blacklisted domains, were Factmata and CheckThis. Fake News Detector, a free Chrome extension by a Brazilian coder, uses a hybrid of crowd-sourced fact checking, plus a "baby bot" algorithm that learns from each flagged post. (Fake News Detector is more transparent than the former about how its algorithms work.)

What's wrong with expert-curated blacklists? Nothing, in theory. Even the most basic plug-in serves as a useful alarm bell. But every librarian knows that determining whether a given article is trustworthy goes beyond checking the source website. Apps that rely on blacklists—even ones like B.S. Detector that code for satire and political bias, or NewsGuard, which touts the transparency of its rubric—put a lot of faith and power in their human list makers.

Beyond ethical debates about media gatekeeping and the authority of list makers, relying on human-curated blacklists is simply not scalable. ThisIsFake, an ambitious plug-in from Slate that flagged individual articles and linked directly to debunking sources, shut down after a year (Oremus 2016). No explanation was given, but it's fair to assume Slate's fact checkers couldn't keep up with the onslaught of false stories.

A room of expert fact checkers—or even an international crowdsourced network like the CrossCheck or Fiskkit platforms—cannot keep pace with the creation of new hoax sites and fake posts. Shao et. al. discovered a lag of 10-20 hours before a false claim is fact-checked by journalists, plenty of time for a post to go viral (Shao et al. 2016, 1-2). Meanwhile, recent exposés on the poor labor conditions and long-term mental health consequences faced by social media "content moderators" reveal the human toll of large-scale fact checking (Chen 2014; Newton 2019). To stop fake news before it goes viral, automation must play a bigger role.

Three Methods of Detecting Fake News

What's the difference between truly automated detection and extensions like NewsGuard? First, consider that fake news is detected by three methods: (1) expert fact checking, (2) crowd-sourced flagging, and (3) computational prediction, also known as automatic detection (Shu et al. 2017). The first two have driven the solutions offered by journalists, whereas computational prediction has been the focus of computer scientists.

The scientific literature indicates an unfortunate communication gap between these two groups. Journalist-led initiatives have produced more user-friendly tools, in the form of crowd annotation/flagging web platforms (e.g., CrossCheck, Fiskkit, ClimateFeedback.org, and Hypothes.is) and browser extensions running on human-curated "blacklists" (e.g., ThisIsFake, B.S. Detector, and NewsGuard). In contrast, computer scientists are developing learning algorithms[2] that can spot fake news without human intervention. These researchers have focused mainly on testing their algorithms for accuracy, but have yet to create functional, publicly available apps. Several promising tools are now in beta, such as the University of Indiana's Hoaxy (Shao et al. 2016) and the Google-backed Factmata from University College London (Jackson 2016).

Three Types of Fake News Algorithms

Automated fake news detection involves three types of learning algorithms: (1) textual/content analysis, (2) user behavior/engagement analysis, and (3) diffusion analysis (tracking the spread of fake stories across networks).

Textual analysis alone can be quite challenging; it's hard to program algorithms to account for satire, bias, and intent (Papadopoulou et al. 2017; Edell 2018). Natural language processing algorithms that incorporate emotional affect and psycholinguistics look promising, since affective language appears

> It will always be important for librarians to host workshops, make libguides, and teach information literacy in all its messy glory.

more often in "clickbait" and contributes to its proliferation (Pérez-Rosas et al. 2017). Meanwhile, user behavior analysis suggest that *who* engages with a post can tell us nearly as much about its "fakeness" as the text itself (Tacchini et al. 2017; Shu, Wang, and Liu 2017). Finally, there's evidence that fake and real stories spread across networks differently (Shu et al. 2017; Zhao et al. 2018).

Successful fake news detection will likely require a combination of all three types of algorithms, or a hybrid approach that incorporates computational prediction as well as crowdsourcing and expert fact checking (Figueira and Oliveira 2017; Ruchansky, Seo, and Liu 2017; Wang 2017).

Facebook is an example of the hybrid approach (Figueira and Oliveira 2017). From what the company has shared publicly, Facebook uses crowdsourcing to flag fake news and other offensive content (users tap somewhat-hidden buttons to "report [an] ad" or "give feedback on this post"). A user behavior algorithm gives flaggers a "reliability score" to indicate how consistently they properly flag fake stories. Reliability scores are likely used to calculate the probability that a specific post is fake and rank the "worst" offenders (Newton 2016; Kozlowska 2017; Figueira and Oliveira 2017). Similar user behavior algorithms have also been used to suppress spam accounts, trolls, and bots (Adewole et al. 2017). Finally, posts identified as "fake" are sent to human "content moderators" Facebook hires through third-party companies, often overseas.

While we don't know the exact process for false news, this is how Facebook handles "offensive" content, including pornography, hate speech, and conspiracy theories that violate its "Community Standards" (Newton 2019; Chen 2014). The exploitative labor conditions and mental health risks for content moderators—many develop PTSD or come to believe conspiracy theories to which they are repeatedly exposed—pose ethical concerns, as detailed in a Verge article (Newton 2019) and upcoming book (Roberts 2019).

Not There Yet

If learning algorithms can be perfected into apps, we could (theoretically) rely less on reactive, costly, ethically problematic human content moderation. A truly automated tool could detect a false story before millions of people have been exposed to it just by analyzing its textual attributes, who has shared it, and how it spreads across social networks. An app could alert users to such stories or even suppress them, in a fraction of the time it takes humans to debunk them. While this is the lofty goal of browser extensions like Fake News Detector, CheckThis, and Factmata, the technology is not there yet.

Obviously, there are dangers in letting algorithms police the news. Most scientific literature ignores the ethical and free speech concerns posed by automation, though Figueira and Oliveira warn against giving machines "total control to decide which information is displayed" (Figueira and Oliveira 2017, 822).

I am somewhat reassured that human experts are still needed to create datasets for training algorithms. Indeed, much of the literature focuses on new sources of datasets (Pérez-Rosas et al. 2017; Shu et al. 2017; Wang 2017), whether crowdsourced fact checking is as reliable as expert fact checking (Tschiatschek et al. claim that it is), or how well algorithms perform compared with control groups of expert fact checkers (Tacchini et al. 2017). In short, expert fact checkers will always be integral to developing algorithms.

Likewise, I won't be giving up fake news teach-ins anytime soon. It will always be important for librarians to host workshops, make libguides, and teach information literacy in all its messy glory. An app can help users spot fake news quickly, but it's still up to readers to interpret the results of any automated solution. As librarians teach critical evaluation and media literacy, it can only help us to have a nuanced understanding of what automatic detection tools can—and cannot—do to stop fake news. **SLA**

NOTES

1 In 2017, Google tweaked its search algorithm to "surface more authoritative pages and demote low-quality content" (Gomes 2017). In 2018, Facebook shrank the size of fake posts and made factual "related" articles appear beside them in users' newsfeeds (Kozlowska 2017). In 2019, YouTube used a combination of AI and "real people" to keep conspiracy theories from popping up as recommended videos (YouTube Team 2019).

2 Sometimes called AI or artificial intelligence, learning algorithms make predictions or calculate probabilities based on existing datasets and become better at making predictions about new content over time, as the dataset grows.

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Visualizing Fake News

BY LESLEY S.J. FARMER, MLS, EDD

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My undergraduate major in college was art. As a school librarian, when I looked at students' posters or flyers and saw how teachers graded them, I cringed at the lack of visual literacy criteria and the focus on good scissor-cutting and neat gluing. So visual literacy, in light of mass media, has been a "cause" for me since the 1980s.

Recent political developments have made it even more crucial. Fake news and disinformation are hot topics, even though the concept is not new. Some caveman may have drawn a dozen bison to impress his cave mates with his hunting prowess when in actuality he killed just one rabbit. With each "new" mass media format—be it the printing press, radio, television or the Internet—has come fake news. The Internet, with its social media tools, has simply expanded the speed and reach of fake news.

As the cave painting example revealed, the spread of fake news has included fake images. In today's global society, people increasingly use visuals to communicate and teach (and spread fake news). Technology enables the artist to manipulate, repurpose and disseminate images quickly and widely to meet different objectives for different audiences. For example, an image of a politician can be changed so that he is placed digitally in a situation that is patently false, such as stabbing a baby, in order to persuade some targeted audience not to re-elect him.

Because such techniques can be performed so expertly, viewers need to be able to ascertain the veracity of images more than ever before. When people believe fake news, they are misinformed and may make poor decisions. When people don't know what to believe, they may become frustrated, polarized, confused, fearful, distrustful, cynical, and withdrawn. None of this helps society.

The need for visual literacy is obvious. In its 2017 resolution on access to accurate information, the American Library Association (ALA) encouraged librarians "to help raise public consciousness regarding the many ways in which disinformation and media manipulation are used to mislead the public" (p. 1) and supported "the critical role of librarians and library workers in all types of libraries in teaching information literacy skills that enable users to locate information and evaluate its accuracy" (p. 1). Librarians can use fake news as an attractive "hook" to teach information and media literacy. More specifically, they can help their constituents discern visual aspects of fake news as a way to address visual literacy.

The most basic definition of visual literacy is "the ability to understand, create and use visual images." In any case, visual literacy is a learned set of skills and knowledge, not an innate ability. And there is a lot to process—the eye normally sees the entire visual image at once, with 30 percent of the brain cortex devoted to visual processing (in contrast to just 3 percent of the cortex being devoted to hearing). Furthermore, some visual elements are culturally defined, such as the connotations of color (e.g., death is associated with black or white).

Sadly, visual literacy education is largely undervalued. Over the years, visual arts education has also decreased in frequency in K-12 education. As a result, many librarians (and their constituents) do not have a strong background in visual literacy. Fortunately, librarians know how to find high-quality information about visual literacy, including visual experts who can speak to this topic. Furthermore, librarians know how to collaborate, so they can complement each other's knowledge base. For instance, the more viewers understand physics principles such as optics, the less likely they will be fooled by manipulated images.

While advertising is not news, its techniques are often used by people who create fake news to get the audience's attention and persuade them. The Museum of Hoaxes offers compelling images of hoaxes throughout the ages, which historians will relish.

Here are some resources you can use to teach visual literacy:

- This bookmark collection includes several resources on visual literacy:
- The Museum of Contemporary Photography introduces visual literacy through photography.

- The virtual instructor explains the elements of art.
- Explore different ways to visualize information using this periodical table infographic.
- Watch how images can be edited (and why).
- Meet the font detectives who ferret out fakery. Wired.
- More generally, librarians can refer to http://tinyurl.com/FakeNewsLibGuide.

The following websites provide some guidance in the visual aspects of fake news.

- https://www.salemstatelog.com/picture-editing-new-era/
- http://www.newstatesman.com/science-tech/technology/2016/08/you-shouldn-t-believe-your-eyes-how-identify-fake-images-online
- http://propaganda.mediaeducationlab.com/
- http://mediashift.org/2017/02/the-dangers-of-fake-news-spread-to-data-visualization/

To start, librarians can conduct professional development sessions with their constituents to show examples of fake news and its consequences. Articles such as this one from *Vanity Fair* can be shared ahead of time to spark group discussion. This video from MSNBC's "Hardball" (and others like it) can be shown to stimulate interest in helping students to become aware of fake news and how to deal with it.

Be it a one-shot presentation, a series of webinars, a co-taught course, or a professional summit, visual literacy instruction offers a valuable tool for addressing fake news and gaining information and media literacy. Understanding how information is visualized is everyone's responsibility, not just my concern. **SLA**

Why Lie? Human Motivations for Misinformation

BY JEN GRAFFUNDER, MLIS

Jen Graffunder is a news researcher at the Dallas Morning News. She can be reached at jgraffunder@dallasnews.com.

Late last year, a German journalist traveled to Minnesota to report on life in a small rural town after the 2016 election. He wrote a story brimming with details of a quaint rural life, which ran in a respected German news magazine. The reporter described how the local movie theater was still showing "American Sniper" to packed houses, two years after its release. He profiled the local city administrator, a young man who had never been on a date and, most poignantly, had never seen the ocean.

It was an intimate portrait of a small, conservative town. It was a deep look into the heart of a group of people. And, above all, it was untrue.

When the story ran, it was clear to the people of Fergus Falls that it was a fabrication. The local movie theater noted that it had shown "American Sniper" for just a month, right when it came out. And Andrew, the city administrator, had posted plenty of photos online with his partner, including some right by the ocean.

When I heard about all of this, I rolled my eyes. As an information professional in a media setting, I was annoyed and angry. The last thing the "fake news" crowd needed was more ammunition.

"Why would you even do something like that?" a co-worker said.

This is an important question for us to consider as professionals on the front lines of the (mis)information wars. Are the people spreading this information all agents of chaos?

In this case, it came out that the reporter was afraid of failure and anxious to get the story "right." He said he was so anxious he got the story very, very wrong.

Are there other emotional or personal reasons someone might knowingly misinform the public? I'd be remiss if I didn't consult the pages of my employer, *The Dallas Morning News*.

On April 17, 1897, a man named S. E. Haydon reported in *The News* that an "airship" had crashed the previous day in the small town of Aurora, Texas. As Haydon told it, an unknown man was killed when his airship crashed into Judge Proctor's windmill. The windmill and the Judge's garden were, sadly, destroyed. Haydon continued: "Mr. T.J. Weems, the United States signal service officer at this place and an authority on Astronomy, gives it as his opinion that [the airship pilot] was a native of the planet Mars."

It's worth noting that Haydon often contributed to local newspapers, so why would he risk his reputation sending this story to *The News*? Was it a joke? Or did it come from a much more sober place?

Just before Haydon wrote his article, the town of Aurora suffered a devastating "spotted fever" epidemic that claimed many lives and caused others to flee. Haydon himself lost his wife and two sons in the epidemic. Another son was permanently blinded by his illness. *The Dallas Morning News* reported that residents of the surrounding area soon became so afraid of contagion that many refused to travel to Aurora to conduct business.

Haydon may well have come up with the story to entice curious locals to visit the town. It certainly worked—today, Aurora draws "UFOlogists" and curious people from all over, looking for a little green man.

What would I say to Haydon today? First, I'd ask him kindly not to submit lies to our paper for publication. Then, I'd talk to him about all the other ways we could bring back Aurora.

As information professionals, our charge is to protect the truth. It's easy to see people spreading false information as a one-dimensional enemy. But sometimes, these false claims come from raw places of human frailty. Maybe the person touting questionable "cure-alls" online had a traumatic experience with traditional medicine and thinks they're protecting others. And maybe the man crying "airship!" is just trying to

save his home.

Let me make clear what I'm *not* saying: I'm not saying that spreading incorrect information is excusable. I'm not saying that we should accept the spread of "fake news." I'm certainly not denying the existence of bad actors out there who really are trying to weaponize misinformation.

When someone is spreading racist, sexist, homophobic rhetoric or using misinformation as a tool of violence, our emotional support should go to the victim first. But I think that there are other times when understanding the motivations behind the untruth can give us insight into the places and circumstances that allow misinformation to take root.

We should call out misinformation and disinformation clearly and emphatically. We're duty bound to do it. But maybe we don't always need to take along our swords to cut down those spreading untruths—maybe, sometimes, we need to take our lamps to guide them. **SLA**

Building an Impact Narrative

Librarians at American University used a one-question survey to collect narrative data from library users and assess the library's support and services.

BY AMANDA B. CLICK, PHD, AND OLIVIA H. IVEY, MLS, MSSW

In early 2018, the authors conducted an assessment project to explore the impact of library support and services for American University students, faculty, and staff in the Kogod School of Business and School of Public Affairs. The project was inspired by a one-question, open-ended qualitative survey of library users at the University of Washington that was designed using critical incident technique (CIT). That survey asked respondents to share stories about their experiences with the library (Belanger, Faber, and Oakleaf 2017).

CIT involves the analysis of "significant instances of a specific activity ... as experienced or observed by the research participants" (Hughes 2007)—in this case, the use of the university library for academic work. The goal was to collect narrative data from library users about their experiences, not quantitative data like satisfaction ratings.

The AU survey instrument was developed in Qualtrics and distributed via e-mail as well as in fliers posted in the School of Business and School of Public Affairs buildings. Both the e-mail and fliers emphasized that the survey should take fewer than five minutes of the participant's time.

We collected very limited demographic information from the participants, including their school affiliation and position (e.g., faculty member or graduate student). The focus of the survey was the following question: Can you think of a time that the library's staff, services, spaces, or resources had a positive impact on your academic work? If participants answered yes, they were asked to describe the experience in just a few sentences. If they chose no, they were asked to briefly comment on this response as well.

Survey Findings

A total of 164 faculty, staff, students and alumni responded to the survey, and more than three-quarters (77 percent) indicated that the library had made a positive impact on their academic work. A large majority of participants (80 percent) were affiliated with the School of Business. Although the business and public affairs communities were targeted, participants from other schools were not prevented from taking the survey. Fifteen responses were collected from those affiliated with other schools, such as the School of International Service and the College of Arts and Sciences. Almost half of the participants were undergraduate students.

Although the survey asked participants to think of a specific example of library support (i.e., the critical incident), many gave general answers in their descriptions. For example, an undergraduate noted, "Love the 'chat with the librarian' feature because it allows me to receive help even if I'm not in the library or late at night." A graduate student observed that the library is a "good place to meet and do group projects."

While these overall impressions (which often referred to physical library spaces) were useful, the comments were not explicitly connected to critical incidents. Fifty-three responses clearly described a critical incident, often involving a specific research assignment or paper.

Three major themes emerged in the survey responses: information literacy, research support, and library spaces. Both faculty and students described positive experiences with information literacy instruction:

- "[A librarian] spoke at our Senior Capstone class and explained citation software and other useful resources for doing research." *undergraduate student, College of Arts and Sciences*

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OLIVIA IVEY is the public affairs librarian at American University in Washington, D.C., and also serves as director of AU Scholars, a first-year living-learning community. Her research interests focus on the role of libraries in community-based research and service learning.

- "Taught my masters class re: research tools available to all at AU." *faculty, Kogod School of Business*

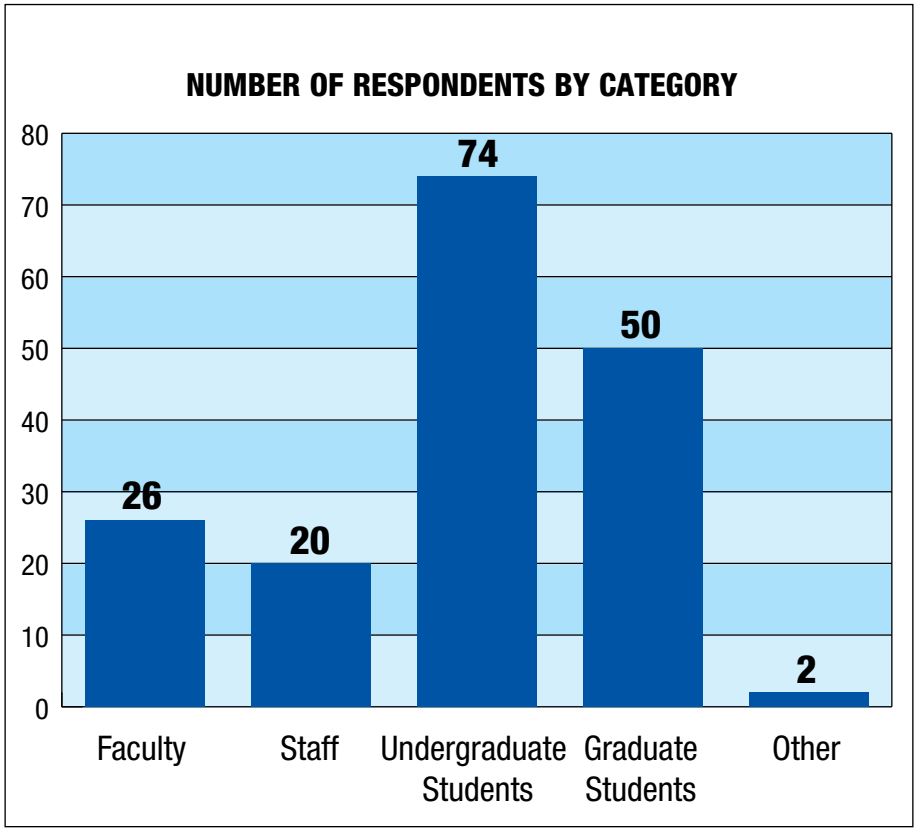
References to research support were also common:

- "Librarians were always equipped and ready to help me with research and gave me skills on how to effectively search for sources." *graduate student, Kogod School of Business*
- "I've had two instances where I have been assigned to write research papers and I was required to cite books; when I went to the library, I asked the main desk for help. They were able to point me in the right direction and gave me call numbers for books that were relevant to my research topic. It was very helpful!" *undergraduate, School of Public Affairs*

The library as a physical space was particularly important to students:

- "Provides a nice place to quietly study in between classes. Especially helpful for students who live in other parts of the city." *graduate student, Kogod School of Business*
- "During finals, it's a great place to study because it has all of the essentials that a student could ever need: printer, quietness, research resources, textbooks, extra pens/pencils, computers, study rooms, comfy chairs." *undergraduate student, School of Public Affairs*

Of those who indicated that they could not think of a time that the library had supported their academic work, the majority stated that they simply did not need help from the library—not yet, at least. A few reported being self-sufficient in their use of library resources, interpreting the absence of human interaction as a lack of proactive assistance from the library. Though rare, a couple of participants reported asking for help and being dissatisfied with the service received. In one example, the librarians staffing the reference desk at time of need did not have the subject expertise the student required, which left the student feeling frustrated.



Discussion

Students referred to other services available in the research commons in the library, including the Writing Center, general technology support, poster printing, and Blackboard support. Interestingly, some support services that are outside the library, such as the Career Center, were also referenced by survey participants. This may speak to the success of the research commons, where groups from across campus provide student support in the library space. From the students' perspective, assistance is streamlined and available at point of need without having to differentiate which office does what. For service providers on campus, it may be difficult to assess the value of their services if students conflate all support with the library.

This type of assessment can provide a window into the library's success in specific initiatives, even without a time-consuming, multi-part survey. For instance, the AU library has dedicated resources in recent years to improving textbook availability on reserve. Saving money on textbooks came up in several responses. An undergraduate business student explained that the reserve system "saves me upwards of a hundred dollars every semester as I don't often need to pay for the textbooks." This demonstrates that the library's effort to improve services is meeting needs that are front of mind for our users.

The assessment project also indicated that additional outreach is needed, especially to graduate students, who are often introduced to the library only briefly during orientation and tend to be on campus only during non-standard business hours. Efforts to demonstrate the value of the library, even during a period of information overload like orientations, could help build relationships with graduate students.

BUILDING AN IMPACT NARRATIVE

Assessing Library Support for the Business School Community

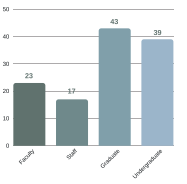
The Project

This assessment project was designed to explore the impact of library support and services for American University business school students, faculty, and staff. Inspired by a project at the University of Washington (Belanger, Faber & Oakleaf, 2017), a one-question qualitative survey asked respondents to share stories about their experiences with the library.

The Survey

The online survey was designed using critical incident technique, which involves the study of "significant instances of a specific activity as experienced...by the research participants" (Hughes, 2007). The first question asked: **Can you think of a time that the library's staff, services, spaces, or resources had a positive impact on your academic work?**

73% of the 122 respondents said yes. They were then asked to describe the experience (i.e. critical incident) in just a few sentences, or explain briefly why they answered no. Responses were coded by theme.



Number of respondents by category

RESEARCH SUPPORT

During my Marketing 300 class brand analysis, the business librarian was always open to talking with me and helping me with my paper. -Undergraduate

Amanda's participation in helping out the MBA students on their global projects has made a significant impact in improving the quality of their final research project. -Faculty

The AU online library resources were useful for researching answers for an assignment in my accounting class. -Graduate

INFORMATION LITERACY

The business librarian has come in to several of my business classes to discuss the library resources. It was helpful to see what is available to me when I am conducting research or writing a paper. -Undergraduate

I am grateful to the library for speaking in my courses about resources. Amanda presented a lecture to my research class on how to conduct tax research. -Faculty

LIBRARY SPACES

Provides a nice place to quietly study in between classes. Especially helpful for students who live in other parts of the city. -Graduate

Having a quiet area for you to be creative and come up with ideas for essays and projects helps massively. -Undergraduate

Good place to meet and do group projects. Solid working spaces to reserve. -Graduate

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Conclusion

This assessment was designed to encourage participants to think about the library in terms of a critical incident or specific experience. The qualitative data collected provides an opportunity to gather impact stories that can help communicate the value of the library across campus. Themes from the data shed light on the ways the library and librarians have been successful in supporting the business and public affairs communities, and also help identify opportunities to improve existing services or try new support models. This type of assessment goes beyond satisfaction ratings to build narratives that help us understand our patrons' needs and be more innovative in our practice. **SLA**

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Seeking Challenge and Variety

Being open to new opportunities and not sacrificing her desire to constantly dig into new subject areas have led Deb Rash to a dynamic and enriching career.

BY DEB RASH, MLS

I have never been bored.

Certainly not as a kid. There was softball and basketball, volleyball and soccer. There was guitar and trumpet. There was reading and poetry and math team and speech.

And not as a young adult in college, either. Deciding whether to major in physics or English was tough. And figuring out that I couldn't compete in every sport and join every club and hang out and go to the library at the same time kicked my tail. Because there was also sleeping in on weekends that had to be accomplished.

Twenty years into my career, I am still looking to do it all and still thriving on variety. I am still demanding it. And now, with two kids who are attempting to do as many activities as I once did, there is absolutely no time to be bored.

My first job out of college and my first job after getting my MLIS were both in advertising. It was perfect—I had multiple clients in multiple industries, and a lot of the work I did was in new business development. If we didn't have a car account, that's what we were going for. Next up, big retail, then appliances and technology. The list could be endless, and so could my digging and diving into new subject areas and new marketing targets.

I remember remarking to colleagues that there was no way I would ever consider going to work for a company that does just one thing or makes just one type of thing. So I stuck with advertising, marketing and communications, working at and with ad agencies, consumer insights companies, and strategic communications firms.

After gaining a lot of experience in this type of environment, I struck out on my own, running a consulting business, Rash Research. I loved it—for the variety and also for what it taught me about time management, marketing myself, and the power of flexibility.

I was consistently excited about what I got to do every day. And I was equally lucky that I was able to share that enthusiasm with others in SLA. The power of SLA for me has been in providing a network, early leadership opportunities, and, later, mentoring opportunities.

I have also been lucky enough to teach as an adjunct in the MLIS department at St. Catherine University. Teaching the Special Libraries class has enabled me to pass on information about some of the eye-opening variety of roles and opportunities in this field to students who are figuring out where they want to land. And teaching the Introduction to Reference class let me meet students even earlier, where I can potentially lead many of them on the path to exploring special libraries.

As I took on a wider variety of clients in my consulting business, I started contracting with Boston Scientific. This was a new challenge, and I eagerly delved into news gathering and business research and used the medical and clinical information requests as a learning experience. When a full-time position opened up, I hesitated at first. Boston Scientific is part of one industry, and it makes one thing—medical devices.

But those devices are used from head to toe and are impacting lives around the world. Unfortunately, there is no shortage of diseases and indications to investigate. And the library at Boston Scientific supports the company at every stage of the product development cycle and beyond. I stopped hesitating and jumped.

I have gone to work almost every day not knowing exactly what areas of information I will be involved with. I think that's probably what makes a lot of our jobs interesting. I have never wanted to be stuck doing one thing or conducting research within the same area, but then, doing what we do, those kinds of jobs have never really existed.

We all need to embrace variety and diversity. We need to thrive on change. Yes, I have routines now for working out and getting my kids to school and putting dinner on the table. I try desperately to make time to read and hang out and even sleep in occasionally, and I wish there would be more consistency with these things.

But with work, I am most consistently excited by the challenges that get thrown my way. Every request and every research need is different. Every day I am doing different things. The variety and learning opportunities are what keep me engaged.

I will never be bored. I trust you won't, either. **SLA**

DEB RASH is the manager of Enterprise Information Solutions at Boston Scientific in Minnesota. She previously has held research positions at Rash Research, Iconoculture and Carmichael Lynch. She has been active in SLA with the Minnesota Chapter and the Business and Finance Division and as a conference planner. Contact her at drash@rashresearch.com.

St. Clair, Bromley, Fisher Head 2019 Class of Awards Recipients

An "evangelist" for knowledge management who has written or co-authored more than a dozen books, a longtime library director for a publisher of legal, tax, regulatory, and business information, and a respected educator at schools of library and information services head a group of 13 information professionals who will receive awards at the Special Libraries Association's 2019 Annual Conference in Cleveland, Ohio, in June.

Guy St. Clair, president of SMR International, a New York-based consultancy specializing in knowledge services and knowledge strategy, will receive the John Cotton Dana Award, SLA's top honor. Named for SLA's founder and first president, the award is granted to an information professional to recognize a lifetime of achievement as well as exceptional service to SLA and the library and information profession.

St. Clair served as president of SLA

in 1991-1992, was named a Fellow of SLA in 1996, and was inducted into the association's Hall of Fame in 2010. He has written widely about solo librarianship, knowledge management, and knowledge services, and his 2009 book, *SLA at 100: From "Putting Knowledge to Work" to Building the Knowledge Culture*, traces the history of SLA from its founding to its centennial.

Marilyn Bromley and **Bill Fisher** will be inducted into the SLA Hall of Fame, which recognizes SLA members at or near the end of their active professional career for their service and contributions to the association or for lengthy distinguished service to an SLA chapter or division that has contributed to the success of the association.

Bromley worked for more than 30 years for BNA (now Bloomberg BNA), the last 22 as library director. She served on the SLA Board of Directors in 2012-2014 and was active in the Washington, D.C. Chapter—serving in several leadership positions, including as president in 1992-1993—and in the Division of Social Science (now the Social Sciences & Humanities Division), serving as its chair in 2010. She was named a Dialog InfoStar in 2002.

Fisher is a professor emeritus at San Jose State University's School of Information, where he joined the faculty in 1988 after a teaching stint at UCLA. He was named a Fellow of SLA in 1998, served as president of SLA in 2002-2003, and received the John Cotton Dana Award in 2008. He served as president of the SLA Southern California Chapter in 1986-1987, as president of the San Andreas Chapter in 1996-1997, and as chair of the Leadership and Management Division in 2010.

The recipients of the other awards that will be presented at the SLA 2019 Annual Conference are as follows:

The Rose L. Vormelker Award, which is presented to a mid-career member in good standing who actively teaches and/or mentors students or working professionals:

- **Eve Wider**

Fellowship in SLA, which is bestowed on active, mid-career SLA members in recognition of past, present and future service to the association and the profession:

- **Geraldine Clement-Stoneham**
- **Nick Collison**
- **Ulla de Stricker**
- **Heather Kotula**
- **Kendra Levine**

The James M. Matarazzo Rising Star Award, which recognizes outstanding new SLA members who show exceptional promise of leadership and contribution to the association and profession:

- **Natasha Chowdory**
- **Angela Pagliaro**
- **Kristin Petersheim**
- **Mea Warren**

Conference Keynotes to Explore Kindness, Search Algorithms, and Future of Profession

A "kindness guru," a panel of library school deans, and the author of a best-selling book on racist and sexist algorithmic bias in commercial search engines will headline the general sessions at the SLA 2019 Annual Conference in Cleveland.

Leon Logothetis, a broker-turned-adventurer who wrote a book titled *Amazing Adventures of a Nobody* and hosted a National Geographic travel series of the same name, will speak at the opening keynote session on Sunday, June 16. His latest book, *Go Be Kind*, builds on his Netflix series "The Kindness Diaries" by describing a series of daily adventures—treasure hunts, dream dates, awkward moments, and the like—that are intended to help readers rediscover the "gift" of kindness and lead them to a happier and more rewarding life.

The keynote session on Monday, June 17, will take the form of a panel discussion on the future of the information profession and the skills that info pros will need to help organizations navigate the digital revolution. SLA President Hal Kirkwood will moderate the discussion; joining him will be deans of three schools of library and

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information science:

- Kendra Albright, Kent State University;
- John Gant, North Carolina Central University; and
- Sandra Hirsh, San Jose State University.

Safiya Noble, an associate professor at UCLA, visiting assistant professor at the University of Southern California, and the author of *Algorithms of Oppression: How Search Engines Reinforce Racism*, will speak at the closing keynote session, on Tuesday, June 18. Her academic research focuses on the design of digital media platforms on the Internet and their impact on issues of race, gender, culture, and technology.

The keynote presentations will be complemented by more than 100 education sessions, dozens of chapter and division business meetings and social events, and countless formal and informal networking opportunities, including a cake and champagne reception to recognize SLA's 110th anniversary. Attendees will also have the opportunity to check out the latest information products and services in the INFO-EXPO, the conference exhibit hall.

To register for the conference, visit https://connect.sla.org/ac2019/registration/reginfo. **SLA**