

Against the Grain

Manuscript 8200

ATG Trendspotting Initiative

Lisa Janicke Hinchliffe

Follow this and additional works at: <https://docs.lib.purdue.edu/atg>

 Part of the [Library and Information Science Commons](#)

This document has been made available through Purdue e-Pubs, a service of the Purdue University Libraries.
Please contact epubs@purdue.edu for additional information.

ATG Trendspotting Initiative

by **Lisa Janicke Hinchliffe** (Project Director and Trend Lab Leader) <Lisalibrarian@gmail.com>

The **ATG Trendspotting Initiative** aims to establish an ongoing, community-engaged process for cooperatively and collaboratively exploring social, policy, economic, technology, and educational trends and forecasting the impacts on the information industry, with particular attention to scholarly communication, publishing, and academic libraries.

Building on the **2018 Charleston Conference FuturesLab**, **ATG Trendspotting** incorporates brainstorming and discussion at the conference but ambitiously adds webinars and published essays to achieve the vision of year-round dialogue on these important issues.

Specifically, we envision:

- Producing a vetted listing of social, policy, economic, technology, and educational trends by means of the **Trend Storm**.
- Hosting a **Trend Lab** forum at the **Charleston Conference** on the potential impacts of the trends on the information industry with a small group of nominated/invited participants.
- Presenting a **Trend Talk** panel at the **Charleston Conference** sharing the results of the Trend Lab discussion and soliciting further input.
- Publishing **Trend Texts**, a set of short essays summarizing the trends, forecasting the impact of the trends on the information industry, synthesizing the discussion at the **Charleston Conference**, and assessing the speed, depth, and desirability of the coming changes.
- Offering a spring 2019 **Trendspotting** webinar sharing summary of process and kicking off the next round of trend identification.

Trend Storm

ATG Trendspotting officially kicked off with a free webinar on June 19, 2019. Attendees had the opportunity to learn about the initiative and the many ways to participate in its activities, including as Trend Storm nominator, Trend Lab participant at the **Charleston Conference**, and/or Trend Texts contributor to the annual essay compendium. Webinar speakers included **Lisa Janicke Hinchliffe**, Project Director and Trend Lab Leader, as well as **Katina Strauch** and **Leah Hinds** of the **Charleston Conference**.

Lisa explained that a trend is a tendency or direction of change over time, which can be increasing or decreasing. A trend can be strong or weak and it can be accelerating or slowing. The chat during the webinar was very dynamic, indicating great interest in this topic. The webinar was recorded and available online at <https://www.charlestonlibraryconference.com/video/webinars/atg-trendspotting/>.

The Trend Storm nominating form was available online for just over one month. Anyone was eligible to submit a response, regardless of whether they were able to attend the **Charleston Conference**. Those nominating potential trends for discussion were asked to answer the following questions on the survey form:

- What is one social, policy, economic, technology, or educational trend that you believe is impacting — or has the potential to impact — scholarly communication, publishing, and academic libraries?
- What thoughts do you have about the impact of this trend on the information industry (specifically, on scholarly communication, publishing, and/or academic libraries)? How would you assess the speed, depth, and desirability of the changes you see coming? Please consider a time horizon of 3-5 years though you may also consider a longer term as well if you would like.

Trend Lab

The **ATG Trendspotting** Expert Panel (**Mark Sandler**, **Heather Staines**, **Tom Gibson**, **Pat Sabosik**) advised **Lisa**, **Katina**, and **Leah** on the selection of trends for discussion at the **Charleston Conference** Trend Lab. It was a challenge to decide which trends of those submitted would be discussed but through a process of consolidation and

prioritization we settled on the following (they are numbered for ease in reference not priority):

1. **All About Analytics and Algorithms (Data, Algorithms, and Move from Descriptive to Predictive)**. Data has always been generated on a continuous and ubiquitous basis but now the collection and compilation of data is occurring at heretofore-unfathomable rates. Data is collected in both expected and surprising spaces and places through more traditional trackers and counts and through smart sensors and activity logging. Driven by this data, analytics and algorithms are now all around us. They create our online environments and increasingly drive our options for interacting with the offline world as well. Your web search results, which driver responds to your ride request, and the price you pay for an airline ticket are just a few of the ways in which analytics and algorithms shape our worlds. This move to using data for predictive analytics rather than only descriptive is a powerful trend. The potential for entrenching bias and structural inequity as well as unseen coercion lurks in the predictive.
2. **Who Really Knows Anyway? (Anti-Intellectualism, Cynicism, and Distrust of Institutions Previously Trusted)**. There is a growing tide of resentment toward “experts” who profess to know more about a subject than most people, and thus think themselves qualified to speak knowledgeably. In some cases, this seems to lead some people to want to believe that anything other than what the experts say is true, especially when it serves their personal or commercial interests. However, the impact of these inclinations on society has generally been held in check by a majority trust in civil institutions such as the press, universities, libraries, and government, which have generally been seen as acting in the public interest and worthy of support. In recent years, however, fueled in large part by social media, the tendency of distrust in civil institutions has been on the rise. More darkly, misinformation and disinformation has been embraced as a tool of oppression and social control by some elites.
3. **Everything is Computational (Artificial Intelligence and Machine Learning)**. Work that has heretofore been assumed to be human work is increasingly carried out by — or in partnership with — artificial intelligence (AI) and machine learning (ML) agents. AI and ML have extended the effectiveness and efficiency of various activities as well as created whole new categories of activities. Automated transportation, medical diagnosis and treatment, financial monitoring, and manufacturing quality control are just some of the many applications. News reporting and legal writing are now carried out in part by bots that provide at least draft copy for human review. Likewise, corpora of texts are the fodder upon which bots are trained. Computationally assisted research is emerging across disciplines. Against these benefits must be considered the reality that such systems replicate and even amplify bias and discrimination.
4. **The Carbon Imprint (Climate Change and Environmental Impact of Publishing and Libraries)**. Climate change reports increasingly make clear that the societal disruption that will result is going to be significant and transformative. Sovereignty, community safety, and economic stability will be challenged as well as individual safety, livelihoods, and property. Countering, or even just slowing, climate change will require a massive and coordinated global effort across all sectors of society. All industries will be challenged to amend and justify their carbon practices and comply with various rules and regulations. Nonetheless, there are significant efforts underway to deny that climate change is occurring and its impact, including information suppression.

continued on page 24

5. You Call That Content? (Content Redefined – Abundance, Formats, Data, Code, Fragmentation). Networked digital information brings us information in quantity vastly greater than anything we have ever known. Some of it is coherent, useful, and intelligent; some of it is less so. Publication once required navigating through a relatively narrow gateway controlled by an organization with access to production resources and a distribution system of its own but in the current era almost anyone, anywhere, can be an author and a publisher. Likewise, published content was previously predominantly text and some audio/visual components. Now, publications include an expansive amount of media materials as well as data and code. We are in the age of information abundance rather than information scarcity and content diversity rather than content homogeneity. Information overload is a daily reality.

6. Securing the Record (Cybersecurity and Threats to Intellectual Property/Content). Cyber espionage and hacking threaten servers and networks at all levels, from the individual to the sovereignty of governments. Companies invest massive resources in attempting to secure their systems from nefarious actors as well as everyday mistakes of employees. In addition, the past years have brought increased attention to social media manipulation as well as the emergence of “deep fakes” in the realm of video. Some have raised the question of whether SciHub or other rogue actors might constitute a threat not only to systems that secure access to digital scholarly communication but to the content itself. The scholarly communications network is much less secure than targets such as governments and corporations though is perhaps also protected in part by its distributed nature.

7. The Common Good Dissolves (Defunding of and Eroding Support for Public Goods). Traditional models of funding elementary, secondary, and higher education are challenged by political movements that look to reduce public expenditures and impose increase accountability demands for public monies invested. This divestment is replicated and amplified internally as units are forced into competition with each other to secure scarce resources. Colleges and universities may also find themselves in riskier political situations, standing up for traditional responsibilities of inquiry, access to vital information, and social mobility against opposing forces, which may result in further divestment.

8. Just for You and Just for Me (Personalization and Customization of Information Environments). The trend seems to be moving in the direction of customization. There is so much information out there to process. There is definitely a tension between marketing and getting the needed information for customization that is not marketing but rather personalized access and delivery. But, does this customization also create filter bubbles and self-reinforcing perceptions as preferences double-back on themselves — at what point does it become a problem that what one accesses limits that of which one is aware? Also, in this “big data” world, what about challenges to privacy? Are these innocuous trivial concerns or serious threats to free inquiry? Is there a trade-off between privacy and usefulness?

9. The Researcher’s Way (Researcher Controlled Information Environments, Workflows, and Tools). Research has always been dynamic and interactive but limitations in technology have led us to gather reports and preserve the findings in a single dimensional way, typically text with some images.

Improvements and accessibility to technology and software now allow us to move beyond text and images. Researchers can now capture and share other dynamic artifacts needed for full understanding, replication, and reuse of scholarly methods and data. The fast growing trend towards new, easy to use platform technologies that allow for creation and sharing research moves researchers from considering theoretical reproducibility to practical reproducibility. Another researcher can rerun the code. However, while software code is increasingly central to research so sharing the code is a necessary step towards reproducibility, just sharing code and data is not sufficient to reproduce a published finding in most cases. The entire package of data, code, the research paper and the computational environment, married with easy to use software tools specifically created for researchers is needed. As these platforms develop, will researchers be locked in to a single integrated platform, or will they mix-and-match tools into a personally developed workflow system?

Approximately 40 people attended the invitational Trend Lab discussion at the **Charleston Conference**. The small group discussions (each group had a single trend though they were free to bring others into their dialogue as well) were intense and far ranging. Each group was asked to document their thoughts on how the trend was manifesting itself in the information industry and the impacts of the trend on scholarship, content creation, quality control, publishing, purchasing/licensing, discovery and access, and information use. After assessing the speed, impact, and desirability of the trend over the coming 3-5 years, small groups were asked to describe what they see as the best-case and worst-case scenarios.

Trend Talk Panel

In order to bring the results of the invitational Trend Lab to the broader community, there was also a Trend Talk Panel during the **Charleston Conference**. Lisa provided a general overview of the **ATG Trendspotting Initiative** and then moderated the panel, which included Trend Lab participants **Kiyomi Deards, Athena Hoepfner, and Heather Staines**. Each panelist was asked: what was the most significant insight gained from the Trend Lab discussion, how can the information industry better prepare for the changes we can foresee in order to benefit from them, and which trends cause you worry or concern.

Attendees at the panel — some of whom had been at the Trend Lab but most of whom had not — also chimed in with their observations and questions. As the session came to an end, the discussion turned to ideas for broadening these conversations and keeping our collective intelligence growing on these topics. Ideas included holding similar events at other conferences and possibly even creating a “trend-lab-in-a-box” toolkit for people who might want to lead such discussions locally or regionally.

Trend Essays

In the coming months, **ATG** will be publishing the follow-up Trend Essays. These essays (1,300-1,500 words) are envisioned to take a variety of approaches — general responses, a focused look at a particular trend, etc. Some authors have already stepped forward but we welcome broader participation. Anyone who would like to write an essay (or who has any other questions or comments!), should contact **Lisa Janicke Hinchliffe**, Project Director and Trend Lab Leader at <lisalibrarian@gmail.com>.

Conclusion

While much remains to be seen about how the **ATG Trendspotting Initiative** will evolve and grow, what is clear is that there is a great interest in and hunger for discussion of the forces that are impacting and shaping our work in the information industry. The intensity of the discussions and the excitement around future possibilities was inspiring. 🌸

