



BERKMAN KLEIN CENTER
FOR INTERNET & SOCIETY AT HARVARD UNIVERSITY

2018-2019 Annual Report

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Executive Summary

Major events last year underscore the urgency and relevance of the Berkman Klein Center's work. From digital privacy violations and cybersecurity vulnerabilities to concerns over harmful speech, election interference, and debates over how fast-moving developments in AI technology can be inclusive and ethical, this year has marked a watershed moment in terms of public awareness of some of the most important issues BKC has been contributing to for over two decades.

Over the past year BKC has brought together a diverse and vibrant community of educators, researchers, builders, and advocates, united in our commitment to academic values and the public interest, to explore frontier issues in the digital technology and society space and to work towards creative solutions to some of the most pressing challenges of our time. This annual report provides snapshots of the work done at BKC and shares a glimpse into our vibrant community. Highlights include the following:

Committed to having **real-world impact**, we have worked to advance the public interest by translating our research and bringing it to policymakers, educators, activists, technologists, and other stakeholders across the globe. Our Youth and Media team, for instance, published open access [youth-oriented learning materials](#) to address digital literacy among youth in over 40 languages reaching over 350,000 youth and educators across the world by way of partner institutions. Jonathan Zittrain's work on information fiduciaries, which started with the question of whether Internet companies should maintain doctor- or lawyer-like duties to protect user data, was incorporated into proposed [U.S. Senate legislation](#). And our Ethics and Governance of Artificial Intelligence team provided expert guidance to the OECD's AI Governance Expert Group, which developed high-level [AI principles](#) adopted by 42 countries, to name just a few examples.

In our role as a **convener and interdisciplinary connector**, we chartered diverse groups to identify some of the hardest problems of our time and work towards possible solutions. For instance, BKC's Cyberlaw Clinic engaged with attorneys general and their deputies from 23 states through the [AGTech Forum](#) on next-generation privacy and security issues. Using novel pedagogical approaches and bridging across communities and spheres, our educational programs also engaged with future leaders: the [Assembly](#) program successfully hosted its third cohort of developers, managers, and tech industry professionals to learn and tackle challenges posed by AI; and our [Techtopia](#) program, a multidisciplinary research and teaching initiative that brings together Harvard students and faculty around the biggest issues in tech today, experienced a fruitful inaugural year, with over half of its students electing to engage in group projects on their own initiative.

In addition to research, convenings, and education, we have continued to make investments in **tool and infrastructure building** to enable the best possible empirical research in critical areas such as public discourse and the future of democracy. For instance, investments in the [Media Cloud](#) tool enabled some of the most in-depth empirical analysis of mis- and disinformation issues surrounding the 2016 presidential election, including in Yochai Benkler, Rob Faris, and Hal Roberts's book on [Network Propaganda](#). The tool, and the research team's methodology, has since been used to observe how elections are covered in countries around the world. Our Internet Monitor project also released a new publicly available tool called [AccessCheck](#), which allows users to track Internet censorship on a global scale and in real-time.

In addition to playing a critical role in shaping our collaborative research agenda, our **increasingly diverse community** of students, staff, affiliates, fellows, and faculty tackled myriad challenges and opportunities in the digitally connected world and produced substantial work that ranges from highly practical to deeply empirical. The 2018-2019 community of fellows and affiliates convened a wide range of disciplines, with experts in data science, algorithmic fairness, data governance, and privacy in the Global South, to name a few examples. Our incoming cohort of fellows and affiliates is equally impressive and will bring a wealth of knowledge and talent; we are eager for them to join our community in the fall.

Our team of 35 staff, 44 fellows, 52 faculty associates, 101 affiliates, and 7 fellows advisory board members, was led by our 15 faculty directors, 2018-2019 was one of our largest and most diverse communities to date. To embrace new opportunities and address the big challenges in the Internet and society space, we also expanded our leadership team and intensified our commitment to building an even more diverse and inclusive community. We are honored that Martha Minow, the 300th Anniversary Professor at Harvard, [joined our Board of Directors](#) in December 2018, and in July 2019, Elisabeth Sylvan, our [new Managing Director](#), joined our operational leadership team.

As we look ahead to 2020 and beyond, we will not only continue to explore areas of deep and growing significance and spark conversations that lead to positive change for those who feel the impact of technology around the globe. We will also double down on our commitment to work together in a respectful and inclusive manner toward technologies and practices for good that benefit people across demographics and geographies. Given the societal urgency of our research topics, we are excited to be increasing our educational efforts with both greater emphasis on existing programs and the introduction of new “pop-up” educational programs — including an AI policy clinic that will leverage the last several years of vital contacts and contributions of our Ethics and Governance of AI Initiative. To be able to execute on these new efforts, we are refreshing our administrative structure and practices, redefining roles for existing staff (and therefore providing new opportunities for them), and hiring new staff in communications, community, and programs.

Accomplishments and Challenges

Accomplishments

We define and measure the success of our projects, programs, and tools in large part by their tangible impact on the world. Whether it be through tools that help serve the public interest, research that informs new policies for national governments, or educational programs that build bridges between disciplines, to name a few examples, we translate our work between disciplines, institutions, and contexts.

Educating future leaders on current pressing issues in the technology and society space

Teaching is at the core of all of our activities and research. Our faculty and community serve students and fellow teachers around the world and bring global conversations about the Internet and society into our classes and convenings in Cambridge.

At HLS, our faculty directors translate their research into engaging and interactive courses and seminars. A sample of such courses from 2018-2019 include:

- “Counseling and Legal Strategy in the Digital Age,” taught by Christopher Bavitz, Clinical Professor of Law at Harvard Law School and Managing Director of Harvard Law School’s Cyberlaw Clinic at the Berkman Klein Center, and Vivek Krishnamurthy, Counsel in the Boston office of Foley Hoag LLP and a Lecturer on Law at Harvard Law School.
- “Advanced Constitutional Law: New Issues in Speech, Press, and Religion,” taught by Prof. Martha Minow and Kendra Albert, a clinical instructional fellow at the Cyberlaw Clinic at Harvard Law School.
- “Comparative Digital Privacy,” a seminar taught by Urs Gasser, Executive Director of the Berkman Klein Center and Professor of Practice at Harvard Law School.
- “Music and Digital Media,” taught by Christopher Bavitz.
- “Applied Ethical and Governance Challenges in AI,” a course taught by Jonathan Zittrain, Co-founder and Faculty Director of the Berkman Klein Center and George Bemis Professor of International Law and Joichi Ito, then-director of the MIT Media Lab and then-affiliate of the Berkman Klein Center.

HLS professor and BKC director William “Terry” Fisher also teaches a Copyright course, and its networked counterpart, [CopyrightX](#). CopyrightX is a twelve-week online course, offered from January to May each year, under the auspices of HLS, the HarvardX distance-learning initiative, and BKC. The course explores the current law of copyright; the impact of that law on art, entertainment, and industry; and the ongoing debates concerning how the law should be reformed. This year, CopyrightX provided rigorous distance learning to a cohort of 350 students from 55 countries around the world. The 2019 teaching fellows, the majority of whom were current HLS students or recent HLS graduates, produced over twelve new case studies ranging from the shifting landscape of cumulative digital authorship through user-generated content, to the copyrightability of tattoos etched on professional athletes and reproduced on their video game avatars.

In addition to courses and seminars, our flagship [Cyberlaw Clinic](#) provides high-quality, pro-bono legal services to appropriate clients on issues related to technology (including speech, privacy, and intellectual property). HLS students enroll in the Clinic for credit and enhance their preparation for high-tech practice by working on real-world litigation, client counseling, advocacy, and transactional/licensing projects and cases. The Cyberlaw Clinic enrolled a total of 66 student slots during the 2018-19 academic year — the program’s largest cohort ever. And it was a productive year: highlights include filing five amicus curiae briefs in cases before the United States Supreme Court and U.S. federal circuit courts of appeals; success in the latest round of Digital Millennium Copyright Act anti-circumvention exemption proceedings before the United States Copyright Office; deep engagement with timely questions about platform responsibility for harmful speech; and development of a set of resources for technologists and artists collaborating on art projects employing machine learning and artificial intelligence. The Cyberlaw Clinic remains one of the most popular clinical programs at HLS, and in response to this demand, is hiring a new Clinical Instructor for the next academic year.

In 2018-2019, BKC also continued to design and launch novel educational modes and tools. In January, for instance, [metaLAB](#) launched [Curricule](#), a tool for students at Harvard to rethink and explore the course catalog and the history of Harvard's curriculum through the use of data visualization, and to identify interdisciplinary connections in their interests. During Curricule's spring release, some 2,355 students used the tool, representing 35 percent of the undergraduate population.

Developing new educational programs and models for closing information gaps

The **Ethics & Governance of AI Initiative**, of which BKC serves as an anchor institution explores and addresses challenges posed by artificial intelligence with a focus on educating policymakers, technologists, scholars, and leaders in the private sector so that they can best navigate AI's risks and opportunities. This agenda takes an adaptive and structural approach, rather than a pure-solutionist one, by developing and applying global cross-sectoral frameworks to collaboratively address problems of AI. It is only fitting that this project, focused as it is on convening and educating, and requiring creative thought and strong independence should be catalyzed – sometimes from the front, and sometimes from behind – by academia. With this educational goal in mind, we developed new educational programs to reach these stakeholders, as well as students at Harvard.

One such program was [Techtopia](#), which launched in fall 2018 and built a multidisciplinary community of faculty and students across Harvard around the biggest challenges in tech today. Techtopia supplemented the traditional disciplinary education model by getting students to build concrete solutions to real-world problems on teams with the diversity of opinions necessary to generate holistic solutions. The program drew a cohort of 17 students from an applicant pool of 80. The cohort consisted of five undergraduate and twelve graduate students from nine Harvard schools (FAS, HBS, Divinity, Law, HKS, Design, Education, Engineering, and the College). The Techtopia community grew to over 45 faculty, senior researchers, fellows, and staff across Harvard. Students worked in groups with faculty advisers to build projects exploring how emotion-detection AI and affective computing might change our relationship with society and technology, how we might make privacy and data literacy more accessible to communities online, and how local governments procure automated decision making technologies. In addition to regular program convenings, Techtopia students joined Jonathan Zittrain in conversation with Mark Zuckerberg, who came to [talk to the group](#) about encryption, “information fiduciaries,” and targeted advertisements. In the upcoming academic year, Techtopia will be renamed the “Assembly Student Fellowship” and folded into a new program – [Assembly: Disinformation](#) – that merges together three existing educational programs and creates further cohesion across our work with various stakeholders.

The **Assembly** program teaches professionals ways to approach emerging challenges and dilemmas through coursework and hands-on projects. Assembly is a joint venture with the MIT Media Lab and held its third iteration this spring. This year, Assembly consisted of a deeply interdisciplinary and diverse cohort of 19 participants who came from industry, academia, government, and civil society, including from Google, DeepMind, Indigo Ag, University of Washington, University of Ottawa, the US Navy, and Open Data Charter. Over three months, participants tackled the ethics and governance of artificial intelligence, engaging in an ideation process, learning from discussions led by Professors Jonathan Zittrain and Joi Ito, and building projects during a collaborative development period. Assembly has generated a rich network of socially aware AI practitioners – engineers, product managers, and designers who have brought the program's lessons back

to their companies. One participant from this year's cohort is transitioning into a full-time ethicist role at his company based on his experiences in the program. In the 2019-2020 academic year, Assembly will be renamed the "Assembly Fellowship" as part of the aforementioned merger of educational programs.

Also under the Ethics and Governance of AI Initiative, BKC supported the development of inclusive AI governance frameworks within the United States by educating policymakers and decision-makers. State attorneys general, for instance, lack access to the classic suite of regulatory tools available to federal agencies and to world-class technical expertise. Recognizing this gap between the power of AGs and their capacity to keep pace with around-the-corner technologies, BKC launched the [AGTech Forum](#), a series of closed-door, multi-day convenings at Harvard Law School to bring state AGs and their staffs up to speed on issues related to privacy, cybersecurity, and – as part of the Ethics and Governance of Artificial Intelligence Initiative – AI and algorithms. With support from the National Association of Attorneys General and the Harvard Law School Attorney General Clinic, the AGTech Forum has laid the groundwork for a scalable mechanism to [provide guidance on tech policy issues](#) to an oft-underestimated dimension of our legal and political system. The two convenings held in 2018-2019 focused on AI and invited AGs to learn about the impacts of these new technologies on a multitude of state enforcement and policy areas, particularly, consumer protection and privacy, anti-discrimination and civil rights, antitrust and competition, labor rights, and criminal justice.

Relatedly, over the last year, the global governance and inclusion track of the Ethics and Governance of AI Initiative informed policy efforts at the national level across multiple countries, as well as enabled the incubation of new institutions focused on AI governance. For example, the global governance and inclusion team advised high-level policy-makers and influenced national AI strategies by working with leaders and entities including [Chancellor Angela Merkel](#), the [ITU's Global Symposium for Regulators](#), the [Canadian government](#), and the [United Nations' High Level Committee on Programmes](#). Members of the research team also provided expert guidance to the [OECD's AI Governance Expert Group](#), which proposed [high-level AI principles](#) adopted by 42 countries. This work has enabled BKC to make a direct impact on regulatory regimes and establish relationships through which we can introduce our tools and research to high-leverage audiences.

Of course, no one center or institution can address these highly global AI-related challenges on its own. To that end, BKC cultivated and highlighted AI expertise across the global [Network of Centers](#) working issues at the intersection of technology and society. Through this collaboration, BKC enabled new AI-governance institutions in Singapore ([SMU Center for AI & Data Governance](#)), Thailand (EDTA in Bangkok), and Taiwan (Center for Global AI Governance at NTHU).

The work conducted by the Ethics and Governance of AI Initiative is illustrative of a broader trend at the BKC: sharing our expertise with friends and collaborators around the world, and drawing in turn from theirs. Our educational mission runs through all of the work that we do, and our community members share their expertise and findings through workshops and conversations at conferences, summits, and convenings around the world, small and large, ranging from the Internet Governance Forum and RightsCon to AI for Good and Fairness Accountability Transparency (FAT)* Asia. Through our work with the Network of Internet & Society Research Centers, for example, BKC co-sponsored and participated in a number of events and projects, including a major regional conference on "Disinformation and Discourse: Rebuilding Trust in Institutions, Platforms, and Civic Spaces" in Jakarta, Indonesia, which identified the diversity of challenges that different countries in the region are facing and sought to find solutions that could be applied across

sectors. And in Cambridge, we host a Luncheon Series that covers a wide range of topics and invites speakers to discuss their work and their new ideas; we livestream these events and post them afterwards to encourage remote participation and engagement.

Producing tools and research with real-world impact

In addition to producing cutting-edge research and creating connections across disciplines, building open source research tools is central to the work we do at BKC, as a means to translate research into action. For example, **Media Cloud** — a collaboration with the Center for Civic Media at MIT — substantially enabled research for the aforementioned “[Network Propaganda](#)” work from Yochai Benkler and our AI project team by allowing the researchers to rapidly surface broad trends in mainstream media coverage surrounding the 2016 Presidential Election. The research was also published as a book, which was named [one of the best books](#) of 2018. Media Cloud is a robust platform for researching the present. In March, for instance, Media Cloud [enabled critical research](#) on media coverage of the Christchurch terrorist attack. The researchers, including Ethan Zuckerman and Joan Donovan, used the tool to analyze over 6,000 articles across the world and trace the amplification of harmful ideologies and manifestos, coding the content based on guidelines for covering such events. Media Cloud and the analysis it facilitates – such as this case study – add important insight into both the research and practice surrounding harmful speech and journalism.

In a similar mode of providing valuable information to journalists, scholars, and the public, in June, our Internet Monitor project released [AccessCheck](#). AccessCheck is a publicly available website that allows people to test the accessibility of websites in over 60 countries around the world in real time. This is the first time that such a tool has been available with a broad range of consistent data with disclosed methodologies, and is intended to inform and support the efforts of those engaged in related public interest work, including journalists, academic researchers, and civil society organizations. AccessCheck was created in partnership with the U.S. State Department.

AccessCheck joins our [Lumen](#) database in our efforts towards greater transparency and understanding of censorship and takedown notices. The Lumen project is an online database of takedown requests related to online content. The project’s primary goals are to educate the public about removal requests and takedown notices that are sent to Internet publishers, search engines, and others; to provide as much transparency as possible about such requests in terms of who is sending them, why, and to what effect; and to facilitate research on the notices. In 2018-2019, Lumen received over two million new notices, averaging approximately 6,000 notices per day. Its data corpus grew to include slightly fewer than eleven million notices referencing just less than four billion URLs. The project website was visited approximately twelve million times by users from virtually every country in the world. These analytics speak to the importance of this database in keeping the public informed about material that does not appear in search results. We have exciting plans to broaden the scope of Lumen and increase its impact over the course of the next academic year.

The **Youth and Media** (YaM) project’s [open access learning resources](#), which are co-designed with youth, also had significant reach this year. A major part of the team’s educational efforts focused on making their resources globally accessible and working with different partners to implement them. Against this backdrop, 18 of YaM’s educational tools were translated into over 40 languages, available on their [Digital Literacy Resource Platform \(DLRP\)](#), with more translated content to be added over time. These resources have been

implemented in regions around the world, reaching youth in 18 countries. While translation alone has substantially increased the reach of YaM's resources, the team also worked with different partners to ensure that the framing of the resources, and examples given with them, are mindful of different cultural differences and contexts.

Fostering greater diversity and inclusion across the Center and our global network

At BKC, our 2018-2019 community of fellows and affiliates was one of our largest and most inclusive cohorts to date. This year's community brought together a wonderful group of people from diverse disciplines and walks of life, including Ph.D. candidates in Applied Mathematics, Computer Science, and Feminist Studies; professors in Communication Studies, Humanities and Education, and Telecommunications; post-docs and graduates from programs in Design, Education, Law, and Psychology. And from outside academia, we welcomed policy and legal experts from the United Nations, from government, and from industry; and human and digital rights advocates, software engineers, and business developers interact and spend time together under the BKC roof — to name a number of perspectives represented. In addition to our BKC fellows, we also hosted a Nieman-Berkman Klein Fellow in Journalism Innovation in conjunction with the Nieman Journalism Lab, and several of our fellows held dual appointments with the Carr Center for Human Rights Policy at the Kennedy School, furthering our deep ties to other centers and schools across the University.

This year, we doubled down on our commitment to make BKC an even more diverse and welcoming environment by creating a stipend for fellows with financial need. These funds have enabled us to increase our ability to support a range of candidates who are traditionally underrepresented in conversations related to Internet and society, including outstanding contributors from the Global South and colleagues who conduct crucial research on critical racial theory and technology. Similarly, through our [EQUALS Commitments](#), we increased our engagement in discussions about gender biases in digital research and representation and even more actively promoted gender diversity in our events and discussions. Through our public events, our workshops and conferences, and our fellows-led Race and Media working group, we have worked closely with our community to consider where and how race and diversity fit into individual and collective research efforts. We also took action to make our conversations more robust by increasing the number of perspectives from across the African continent, Latin America, the Middle East, and Asia, from people in the LGBTQIA+ community, and from people committed to studying and advancing disability rights and access, among others.

Based on both diversity and inclusion research and best practices, BKC has implemented improved outreach and hiring processes. This past summer, after a nationwide search, Elisabeth Sylvan [joined our leadership team](#) as Managing Director of the Center. Building on her research on sociotechnical systems that support community building and creative activity, Lis will bring fresh ideas about how to support the productive exchange of ideas among our diverse community. Her initial focus has been to examine and streamline organizational processes across the Center and to define the staffing needs for our work's next phase. At present, she is leading the hiring processes for a number of critical open roles at BKC, and recruiting a diverse applicant pool is at the forefront of this process. We remain committed to increasing diversity across various metrics and on both the staff and programmatic levels. Our increasingly diverse community helps us to ensure that our work — and our network — is inclusive, representative, and widely applicable as we strive to serve the public interest. Of course, much more work remains to be done, and we will continue to expand our community and network, bringing novel perspectives and underrepresented voices to BKC.

The impact of our work over the 2018-2019 academic year underlined the importance of what we do at BKC. As we look ahead to the next academic year and beyond, we reflect on our privilege to participate in, and contribute to, this learning environment that has such a deep impact on people and the world. We are also thinking about the role centers like ours play in an ever connected world with increasingly complex challenges ahead, both in terms of current events and fundraising. We plan to draw on the expertise of our incoming 2019-2020 community to build a “community of learning” and discuss what it means to be an Internet & society center in today’s environment, and in what ways we can leverage our expertise and our network to promote the public interest.

Challenges

We see ahead of us an abundance of exciting opportunities – as well as big challenges in our research areas – many of which will be shaped by the ways in which we can leverage digital technology for the social good and in the public interest. The list of topics is long, ranging from the deep transformations associated with the rollout of AI-based technologies, pervasive cybersecurity risk, next-generation privacy vulnerabilities, concentration of data and power, new and amplified existing inequalities and injustice, but also new opportunities for empowerment and education, for collaboration and creativity, well-being and growth.

At the same time, we also face ongoing pressure to adapt not only to the topics of the day, but the means by which we approach our work. Sponsored research funding is becoming increasingly project-specific, complicated by diminished resources, smaller awards, greater demands on measurement, heightened scrutiny of potential funders, and overall uncertainty on the role of academia in public discourse.

These external challenges present real questions for our modes of engagement with the world and our many research initiatives. Among the driving factors behind decisions such as our 2019 Managing Director hire and forthcoming expansion of our communications team is the realization that we will have to develop a roadmap for how to become more agile and modular across BKC so that we are able to respond more flexibly to both emerging opportunities as well as longer-term challenges in the funding space. This will require an investment in our team’s overall capacity while re-examining our staffing structure, considering carefully our relationship to our expansive community of fellows and affiliates, and flexibly engaging with visiting faculty and other researchers for discrete projects rather than extended tenures.

Such a change in “operating systems,” as it were, is manifest in a new philosophy of “pop-up institutes” which will grow more evident in the coming year as we pilot a consolidated Assembly program incorporating the Assembly, Berklett, and Techtopia programs described above. These pop-up institutes would be independent, problem-specific “centers within a center” logistically supported by BKC’s infrastructure and staffed by term-limited participants from not only academia but also industry and government – hand-picked cohorts mindfully calibrated to an appointed problem. Critically, these centers would be impermanent. They would spring into being for a finite stretch of time and make progress in their narrow domain, possibly spurring ongoing action even as they themselves dissolve. The term- and topic-limited nature of the “pop-up” could appeal to funders who are anxious to address current needs but reluctant to enter into long-term funding commitments. By leveraging the infrastructure of “host” centers like BKC, the “pop-up” model could further reduce overhead and sharply truncate project launch times.

We approach this model as an initial pilot at BKC, which later could offer a new method for academia generally. Our status as a premier established center in digital society issues, our deep interdisciplinary network, our ability to build as well as ideate, including our robust experience with getting self-contained initiatives like Creative Commons and the Digital Public Library of America off the ground, and our relevant existing programs, most notably Assembly and Techtopia, position us to support the development of a successful first iteration of the “pop-up” concept suitable as an extensible model for future efforts by other centers.

This move signals a shift in emphasis toward multidisciplinary educational programs while refocusing the world-class research programs for which BKC is known. Alongside the “pop-up” institutes, we propose accompanying structures to further sponsored research and to facilitate the international networking and policy interventions, including a Policy Clinic model for leveraging relationships with entities across the private and public sector in order to translate the research, tools, and frameworks developed across the institute into practice. The capacity developed as part of the Policy Clinic and other institute components will be further extended and replicated by our global [Network of Centers](#), largely developed in the course of the Ethics and Governance of AI Initiative’s first two years. By connecting our work with that of affiliates around the world, we will be able to operationalize – and appropriately localize – the resources we generate in contexts that might otherwise be beyond our reach. Given that digital information flows aren’t known for hewing to established geopolitical borders, we anticipate many opportunities for meaningful crossover and, potentially, also for unlocking new funding sources.