Carnegie Mellon University
Center for Human Rights Science

2019-2020 CHRS REVIEW

"Where, after all, do universal rights begin? In small places, close to home..."

—ELEANOR ROOSEVELT

2020 has been the most challenging year of the Center for Human Rights Science's decade-long existence, and we know we are not alone. The pandemic, and the unsettling political situation here in the United States that recently culminated in a white supremacist insurrection at the U.S. Capitol, has reminded us of the uncertainty, fear, and insecurity that frontline human rights practitioners in many parts of the world face every day. These events highlight the fragility of democracy and reinforce the significance of the work that our partners do to combat injustice wherever it occurs. The work of human rights documentation and advocacy is more important than ever and we are more committed than ever to supporting these efforts with science and technology. In this newsletter, we will update you on what we've accomplished recently and what we're looking forward to in 2021 and beyond. We'd love to hear your feedback, and we can't wait to reconnect with you in person once it's finally safe to do so!

Starting with Gratitude!

We wanted to begin by acknowledging everyone who helped us with the strategic planning effort that helped us clarify of our mission, methods, and organizational identity. We cannot thank Betsy Bramon from Kronia Collaborative, the VIM Collaborative team, and our internal and external advisors enough! We invite you to check out the fruits of this effort on our updated website, which was reimagined and redesigned by Jay's amazing former student Joyce Wang. We are especially happy about the two amazing case studies that Joyce put together to highlight the impact of our work with our human rights partners both in the United States and internationally. Thank you, Joyce!

Program Updates

Over the past two years, the Human Rights Statistics Program has intensified its focus on human rights issues associated with law enforcement and incarceration in the United States, especially deaths in custody. In 2019, we began a partnership with the Pennsylvania Prison Society (PPS) to explore how to use publicly available data to assess conditions in our state's jails and prisons. Early analyses documented concerns—for example, that 40% of deaths in Pennsylvania's jails are due to suicide and that death rates vary noticeably between facilities. We are now working on methods to compare death rates in incarcerated populations to relevant non-incarcerated populations. Additionally, we are working with PPS, the John Howard Association of Illinois, and the Correctional Association of New York, to develop a set of indicators that can be used to assess prison conditions within and across jurisdictions. Our students reviewed hundreds of pages of standards from the American Bar Association and the UN to synthesize a list of quantifiable indicators and have mapped the data available in each jurisdiction to describe facilities and incarcerated individuals. Jay's book project with Dr. Roger Mitchell, Jr. (the Chief Medical Examiner and Deputy Mayor for Public Safety of Washington, DC) on improving the way we record and investigate deaths in custody was waylaid by the pandemic and the country's belated reckoning with racist policing, but we are still making progress and look forward to completing our manuscript by the spring of 2022. The Statistics Program continues to support existing international partners and explore new opportunities, but the focus of our efforts in the coming years will be on developing resources for law enforcement oversight.

As part of our strategic planning effort, we clarified the structure of the Human Rights Technology Program. It is now organized under two complementary initiatives: the Human Rights Technology Lab and the Emerging Technologies Observatory. The Human Rights Technology Lab (a.k.a RightsLab) is a collaborative R&D platform for exploring, testing, and proactively documenting best practices, technological innovations, and methodological advancements that could be of use to human rights practitioners and journalists dedicated to documenting and analyzing human rights conditions around the world. RightsLab is the formalization of the long history of collaborative innovation that has taken place under the auspices of CHRS. The Emerging Technologies Observatory critically analyzes emerging technologies, methods, and use cases from a human rights perspective. We hope the Observatory becomes a trusted brand that human rights practitioners and technologists can look to when seeking out this kind of analysis. Moving forward, we will be formalizing our methods for doing human rights-oriented evaluations of new technologies.

Activities

Before the pandemic hit, we participated in numerous meetings and events around the world, and we did our best to continue this process virtually after March 2020. Highlights included the World Economic Forum, Mozfest, RightsCon, UC Berkeley, University of Dayton, the International Criminal Court, the American Anthropological Association, the National Association for the Civilian Oversight of Law Enforcement, the American Association for the Advancement of Science, and the Joint Statistical Meeting, among many others. In 2020, we also participated in a conference on AI for Social Good organized by colleagues from Carnegie Mellon's School of Computer Science.

Jay continued to give lectures and advise students in South Africa at the University of Pretoria's Centre for Human Rights (CHR), where he is an Extraordinary Lecturer in the Faculty of Law. Building on the success of several years of visits to Pretoria, the Center for Human Rights Science and CHR established a strategic partnership in April 2019 to pursue joint projects and academic activities that will foster human rights accountability using technology. In addition, CHRS became a member of the Association of Human Rights Institutes in 2020 with CHR's support and endorsement. Robin has continued her work with the American Statistical Association Committee on Scientific Freedom and Human Rights and as a co-director of the Center for Statistics and Applications in Forensic Evidence, a National Institute of Standards and Technology center of excellence comprised of faculty from six core universities and additional partners. Enrique has continued to be centrally engaged in a variety of standards-setting activities and technology development efforts that involve partners and institutions around the world.

CHRS Workshops

Over the past ten years, CHRS has sought to convene workshops that bring together people with diverse backgrounds, expertise, and experiences for mutual learning, articulation of technical challenges and needs of the human rights community, the development of partnerships between researchers and practitioners. Despite the pandemic, we held two such events in 2020. The Technology Program ran a workshop on AI and Geospatial Image Analysis that brought together colleagues at Carnegie Mellon with our partners in the human rights community who integrate geospatial image analysis into their work. The purpose of this workshop was to update the human rights community on the current state of AI-based image and analysis tools and to give AI researchers a sense of the kinds of problems faced in the human rights community. The Statistics Program ran a workshop on developing metrics for evaluating correctional systems. This meeting brought together activists and researchers from around the United States to discuss strategies and challenges in holding state prison systems and local jails accountable for the health and safety of incarcerated populations. The Statistics program also organized panels

on the statistical and political challenges to the 2020 U.S. Census at the American Association for the Advancement of Science Annual Meeting and the Joint Statistical Meetings.

Direct Technical Assistance

Over the past two years, the Technology Program has continued to provide direct technical assistance to human rights practitioners on video forensics, the use of AI for open-source investigations, and the preservation of digital evidence. These interactions helped us better understand how the needs for technology develop within certain organizations and the avenues for the adoption of emerging technologies within the human rights community. We provided direct assistance through:

Engagements with multiple organizations and international mechanisms, like the Commission for International Justice and Accountability the International Impartial and Independent Mechanism, The International Residual Mechanism for Criminal Tribunals, and others to improve the use of use of technology on digital evidence collection, management, and analysis. We continue to provide support to the Office of the Prosecutor at the International Criminal Court.

Work with Global Legal Action Network to support a repository of digital evidence suggesting targeting of civilians and civilian infrastructure in Yemen, which violates international law. The preservation of this content will be important in any future criminal proceedings for these attacks. In coordination with the University of Swansea, we collaborated with HURIDOCS to create a prototype of an integrated and interoperable system to support their documentation and analysis needs.

Support for visual investigations by the *New York Times*, the *Washington Post*, and the *Pittsburgh Post-Gazette*.

Provision of access to Digital Evidence Vault (DEV) to dozens of individuals from human rights organizations and media outlets. DEV is a solution in the CHRS toolkit that enables investigators, analysts, journalists, and researchers to collect and preserve digital content in a secure and efficient manner. DEV is built specifically to ensure evidentiary and probative value for transparency and accountability projects, legal cases, historical clarification efforts and truth commissions, and the public interest.

Technology Development

Working with collaborators in the School of Computer Science, we developed a new tool called the Video Event Reconstruction and Analysis (VERA) system that brings together several of our video analysis tools (synchronization, geolocation, gunshot detection, and other forms of sound analysis) to make it easier to do the kind of event reconstruction that we have been performing for human rights and media organizations over the past few years. The system is available as open-source code on Github.

Throughout 2020, we have also collaborated with partners in Canada, Syria, Afghanistan, and elsewhere to develop a system for safely preserving and analyzing video from conflict and human rights situations that does not depend upon the beneficence of social media platform companies or governments. We received a small, exploratory grant for this project, called the Digital Traces of Conflict Repository, and hope to obtain more funding in 2021.

Closing with Gratitude

Thanks to all of you who have worked with us, supported us, guided us, and advised us during these very turbulent times. We are grateful to all of you, and look forward to working together to create a more just and peaceful world. We hope you are able to stay safe and sane until we are able to meet again in person.

— Jay, Robin, and Enrique

Your contribution will support more than just a single initiative. Our knowledge, tools and methods are shared across projects and available to the entire human rights community.

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