This material is based upon work supported by the National Science Foundation under Grant No. 1654085.
February 27, 2018

We are pleased to introduce FPF’s eighth annual Privacy Papers for Policymakers. Each year, we invite privacy scholars and authors with an interest in privacy issues to submit scholarship to be considered by members of our Advisory Board. A committee of Reviewers and Judges from the Board then selects the scholarship they feel best analyzes emerging privacy issues and is most useful for policymakers in Congress and at government agencies, as well as for international data protection officials.

This year’s winning papers grapple with a range of issues critical to regulators. Some of the papers analyze broader conceptions of how regulators, markets, and society at large consider different conceptions of privacy, prompting the reader to think critically about assumed paradigms. One paper argues that the definition of “public information” is unsettled and hazy, meriting a more rigorous analysis of the definition in legal determinations and policy discourse (Hartzog); another argues for a coalesced understanding of how privacy is conceptualized between the rights-based model in Europe and the marketplace-based model in the United States (Schwartz & Peifer).

Other papers offer key recommendations for how to best attack precise concerns in privacy law and policy. One paper argues that the role of technology surveillance companies must be curtailed to facilitate meaningful transparency over how that technology is used by police departments (Joh). Others propose mechanisms to prevent the disproportionate effects of secondary health data usage on vulnerable populations (Konnoth), and taxonomize design and policy strategies for diminishing discriminatory mechanisms in online platforms (Levy & Barocas). Striking the balancing between foundational analysis and narrower proposals, another paper contextualizes the role of artificial intelligence in law and policy, and proposes how relevant governance strategies should develop (Calo).

Following the introduction of our Student Paper Award last year, we are proud to continue highlighting student work by honoring another stellar article. The winning paper (Gupta) offers an insightful approach to the marketplace forces that shape the adoption of privacy and security standards, highlighting the role of individual actors in driving trends. As novel issues in law and technology continue to present new challenges to policymakers, we want to support the students who will one day shape important debates.

We thank the National Science Foundation for their support of this project. And as always, we thank the scholars, advocates, and Advisory Board members who are engaged with us to explore the future of privacy.

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Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.
Artificial Intelligence Policy: A Primer and Roadmap

Ryan Calo

Executive Summary

Talk of artificial intelligence is everywhere. People marvel at the capacity of machines to translate any language and master any game. Others condemn the use of secret algorithms to sentence criminal defendants or recoil at the prospect of machines gunning for blue, pink, and white-collar jobs. Some worry aloud that artificial intelligence will be humankind’s “final invention.”

This essay, prepared in connection with UC Davis Law Review’s 50th anniversary symposium, explains why AI is suddenly on everyone’s mind and provides a roadmap to the major policy questions AI raises. The essay is designed to help policymakers, investors, technologists, scholars, and students understand the contemporary policy environment around AI at least well enough to initiate their own exploration. Topics covered include justice and equity, use of force, safety and certification, privacy, taxation, and displacement of labor. The essay also touches briefly on broader systemic questions, such as institutional configuration and expertise, investment and procurement, removing hurdles to accountability, and correcting mental models of AI.
Author

**Ryan Calo** is the Lane Powell and D. Wayne Gittinger Associate Professor at the University of Washington School of Law. He is a faculty co-director (with Batya Friedman and Tadayoshi Kohno) of the University of Washington Tech Policy Lab, a unique, interdisciplinary research unit that spans the School of Law, Information School, and Paul G. Allen School of Computer Science and Engineering. Professor Calo’s research on law and emerging technology appears in leading law reviews (California Law Review, University of Chicago Law Review, and Columbia Law Review) and technical publications (MIT Press, Nature, Artificial Intelligence) and is frequently referenced by the mainstream media (NPR, New York Times, Wall Street Journal). Professor Calo serves as an advisor to many organizations, including the AI Now Institute, and is a member of the R Street Institute’s board.
Platforms that connect users to one another have flourished online in domains as diverse as transportation, employment, dating, and housing. When users interact on these platforms, their behavior may be influenced by preexisting biases, including tendencies to discriminate along the lines of race, gender, and other protected characteristics. In aggregate, such user behavior may result in systematic inequities in the treatment of different groups. While there is uncertainty about whether platforms bear legal liability for the discriminatory conduct of their users, platforms necessarily exercise a great deal of control over how users’ encounters are structured—including who is matched with whom for various forms of exchange, what information users have about one another during their interactions, and how indicators of reliability and reputation are made salient, among many other features. Platforms cannot divest themselves of this power; even choices made without explicit regard for discrimination can affect how vulnerable users are to bias. This article analyzes ten categories of design and policy choices through which platforms may make themselves more or less conducive to discrimination by users. In so doing, it offers a comprehensive account of the complex ways platforms’ design choices might perpetuate, exacerbate, or alleviate discrimination in the contemporary economy.
Authors

Karen Levy is an Assistant Professor in the Department of Information Science at Cornell University and associated faculty at Cornell Law School. She researches how law and technology interact to regulate social life, with particular focus on social and organizational aspects of surveillance. Dr. Levy’s research analyzes the uses of data collection for social control in various contexts, from long-haul trucking to intimate relationships, with emphasis on inequality and marginalization. She holds a Ph.D. in Sociology from Princeton University and a J.D. from Indiana University Maurer School of Law. Before joining Cornell, she was a postdoctoral fellow at NYU’s Information Law Institute and at the Data & Society Research Institute.

Solon Barocas is an Assistant Professor in the Department of Information Science at Cornell University. His current research explores ethical and policy issues in artificial intelligence, particularly fairness in machine learning, methods for bringing accountability to automated decision-making, and the privacy implications of inference. He was previously a Postdoctoral Researcher at Microsoft Research, where he worked with the Fairness, Accountability, Transparency, and Ethics in AI group, as well as a Postdoctoral Research Associate at the Center for Information Technology Policy at Princeton University. Solon completed his doctorate in the Department of Media, Culture, and Communication at New York University, where he remains a Visiting Scholar at the Center for Urban Science + Progress.
Health Information Equity

Craig Konnoth
Available at: http://scholar.law.colorado.edu/articles/701

Executive Summary

In the last few years, numerous Americans' health information has been collected and used for follow-on, secondary research. This research examines correlations between medical conditions, genetic or behavioral profiles, and treatments, to customize medical care to specific individuals. Recent federal legislation and regulations make it easier to collect and use the data of the low-income, unwell, and elderly for this purpose. This would impose disproportionate security and autonomy burdens on these individuals. Those who are well-off and pay out of pocket could effectively exempt their data from the publicly available information pot. This presents a problem which modern research ethics is not well equipped to address. Where it considers equity at all, it emphasizes underinclusion and the disproportionate distribution of research benefits, rather than overinclusion and disproportionate distribution of burdens.

I rely on basic intuitions of reciprocity and fair play as well as broader accounts of social and political equity to show that equity in burden distribution is a key aspect of the ethics of secondary research. To satisfy its demands, we can use three sets of regulatory and policy levers. First, information collection for public research should expand beyond groups having the lowest welfare. Next, data analyses and queries should draw on data pools more equitably. Finally, we must create an entity to coordinate these solutions using existing statutory authority if possible. Considering health information collection at a systematic level—rather than that of individual clinical encounters—gives us insight into the broader role that health information plays in forming personhood, citizenship, and community.
Author

**Professor Craig Konnoth’s** work lies at the intersection of health law and policy, bioethics, civil rights, and technology. His papers consider how health privacy burdens are created and distributed, how medical discourse is used both to enable and harm civil rights and autonomy, and how technology can be used to improve health outcomes. He has examined these issues in contexts as diverse as religion and biblical counseling, consumer rights and transparency, FDA regulation, and collection of individual data.

Professor Konnoth’s publications have appeared in the Yale Law Journal, the Hastings Law Journal, the Penn Law Review, the Iowa Law Review, the online companions to the Penn Law Review & the Washington & Lee Law Review, and as chapters in edited volumes.

Before arriving at the University of Colorado, Craig was a Sharswood and Rudin Fellow at Penn Law School and NYU Medical School, where he taught health information law, health law, and LGBT health law and bioethics. Before that he was the Deputy Solicitor General and the Inaugural Earl Warren Fellow at the California Department of Justice where he litigated primarily before the United States Supreme Court, and also before the California Supreme Court and the Ninth Circuit Court of Appeals. Cases involved the contraceptive mandate in the Affordable Care Act, Sexual Orientation Change Efforts, Facebook privacy policies, and cellphone searches. Before moving into government, Craig was the R. Scott Hitt Fellow in Law & Policy at the Williams Institute at UCLA Law School, where he focused on issues affecting same-sex partners, long term care, and Medicaid coverage issues, and drafted HIV rights legislation. He holds a J.D. from Yale, and an M.Phil. from the University of Cambridge. He clerked for Judge Margaret McKeown of the Ninth Circuit Court of Appeals.
The Public Information Fallacy

Woodrow Hartzog


Executive Summary

The concept of privacy in “public” information or acts is a perennial topic for debate. It has given privacy law fits. People struggle to reconcile the notion of protecting information that has been made public with traditional accounts of privacy. As a result, successfully labeling information as public often functions as a permission slip for surveillance and personal data practices. It has also given birth to a significant and persistent misconception — that public information is an established and objective concept.

In this article, I argue that the “no privacy in public” justification is misguided because nobody knows what “public” even means. It has no set definition in law or policy. This means that appeals to the public nature of information and contexts in order to justify data and surveillance practices is often just guesswork. There are at least three different ways to conceptualize public information: descriptively, negatively, or by designation. For example, is the criteria for determining publicness whether it was hypothetically accessible to anyone? Or is public information anything that’s controlled, designated, or released by state actors? Or maybe what’s public is simply everything that’s “not private?”

If the concept of “public” is going to shape people’s social and legal obligations, its meaning should not be assumed. Law and society must recognize that labeling something as public is both consequential and value-laden. To move forward, we should focus the values we want to serve, the relationships and outcomes we want to foster, and the problems we want to avoid.
Woodrow Hartzog is a Professor of Law and Computer Science at Northeastern University, where he teaches privacy and data protection law, policy, and ethics. He holds a joint appointment with the School of Law and the College of Computer and Information Science. Professor Hartzog’s work has been published in numerous scholarly publications such as the Yale Law Journal, Columbia Law Review, California Law Review, and Michigan Law Review and popular national publications such as The Guardian, Wired, BBC, CNN, Bloomberg, New Scientist, Slate, The Atlantic, and The Nation. He has testified twice before Congress on data protection issues. His book, Privacy’s Blueprint: The Battle to Control the Design of New Technologies, is forthcoming in Spring 2018 from Harvard University Press.
Transatlantic Data Privacy Law

Paul M. Schwartz and Karl-Nikolaus Peifer
Available at: https://georgetownlawjournal.org/articles/249/transatlantic-data-privacy-law/pdf

Executive Summary

International flows of personal information are more significant than ever, but differences in transatlantic data privacy law imperil this data trade. The resulting policy debate has led the EU to set strict limits on transfers of personal data to any non-EU country—including the United States—that lacks sufficient privacy protections. Bridging the transatlantic data divide is therefore a matter of the greatest significance.

In exploring this issue, this article analyzes the respective legal identities constructed around data privacy in the EU and the United States. It identifies profound differences in the two systems’ images of the individual as bearer of legal interests. The EU has created a privacy culture around “rights talk” that protects its “data subjects.” In the EU, moreover, rights talk forms a critical part of the postwar European project of creating the identity of a European citizen. In the United States, in contrast, the focus is on a “marketplace discourse” about personal information and the safeguarding of “privacy consumers.” In the United States, data privacy law focuses on protecting consumers in a data marketplace.

This article uses its models of rights talk and marketplace discourse to analyze how the EU and United States protect their respective data subjects and privacy consumers. Although the differences are great, there is a path forward. A new set of institutions and processes can play a central role in developing mutually acceptable standards of data privacy. The key documents in this regard are the General Data Protection Regulation, an EU-wide standard that becomes binding in 2018, and the Privacy Shield, an EU–U.S. treaty signed in 2016. These legal standards require regular interactions between the EU and United States and create numerous points for harmonization, coordination, and cooperation. The GDPR and Privacy Shield also establish new kinds of governmental networks to resolve conflicts. The future of international data privacy law rests on the development of new understandings of privacy within these innovative structures.
Authors

**Paul M. Schwartz** is a leading international expert on information privacy law. He is Jefferson E. Peyser Professor at the University of California, Berkeley Law School and a director of the Berkeley Center for Law and Technology. Professor Schwarz is the author of many books, including the leading casebook, “Information Privacy Law,” and the distilled guide, “Privacy Law Fundamentals,” each with Daniel Solove. Schwartz's over fifty articles have appeared in journals such as the Harvard Law Review, Yale Law Journal, Stanford Law Review, University of Chicago Law Review and California Law Review.

Professor Schwartz is co-reporter of the American Law Institute's Principles of the Law, Data Privacy. He is a past recipient of the Berlin Prize Fellowship at the American Academy in Berlin and a Research Fellowship at the German Marshall Fund in Brussels. Schwartz is also a recipient of grants from the Alexander von Humboldt Foundation, Fulbright Foundation, and the German Academic Exchange. He is a member of the organizing committee of the Privacy + Security Forum, International Privacy + Security Forum, and Privacy Law Salon. Schwartz publishes on a wide array of privacy and technology topics including cloud computing, financial privacy, European data privacy law, and comparative privacy law.

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The Undue Influence of Surveillance Technology Companies on Policing

Elizabeth Joh
Available at: http://www.nyulawreview.org/sites/default/files/Joh-FINAL_0.pdf

Executive Summary
Conventional wisdom assumes that the police are in control of their investigative tools. But with surveillance technologies, this is not always the case. Increasingly, police departments are consumers of surveillance technologies that are created, sold, and controlled by private companies. These surveillance technology companies exercise an undue influence over the police today in ways that aren’t widely acknowledged, but that have enormous consequences for civil liberties and police oversight. Three seemingly unrelated examples—stingray cellphone surveillance, body cameras, and big data software—demonstrate varieties of this undue influence. The companies that provide these technologies act out of private self-interest, but their decisions have considerable public impact. The harms of this private influence include the distortion of Fourth Amendment law, the undermining of accountability by design, and the erosion of transparency norms. This essay demonstrates the increasing degree to which surveillance technology vendors can guide, shape, and limit policing in ways that are not widely recognized. Any vision of increased police accountability today cannot be complete without consideration of the role surveillance technology companies play.
Author

Elizabeth E. Joh is a Professor of Law at the University of California, Davis School of Law, and is the recipient of the 2017 Distinguished Teaching Award. Professor Joh has written widely about policing, technology, and surveillance. Her scholarship has appeared in the Stanford Law Review, the California Law Review, the Northwestern University Law Review, the Harvard Law Review Forum, and the University of Pennsylvania Law Review Online. She has also provided commentary for the Los Angeles Times, Slate, and the New York Times.
Executive Summary

This paper examines the hypothesis that it may be possible for individual actors in a marketplace to drive the adoption of particular privacy and security standards. It aims to explore the diffusion of privacy and security technologies in the marketplace. Using HTTPS, Two-Factor Authentication, and End-to-End Encryption as case studies, it tries to ascertain which factors are responsible for successful diffusion that improves the privacy of a large number of users. Lastly, it explores whether the FTC may view a widely-diffused standard as a necessary security feature for all actors in a particular industry.

Based on the case studies chosen, the paper concludes that while single actors/groups often do drive the adoption of a standard, they tend to be significant players in the industry or otherwise well positioned to drive adoption and diffusion. The openness of a new standard can also contribute significantly to its success. When a privacy standard becomes industry dominant on account of a major actor, the cost to other market participants appears not to affect its diffusion.

A further conclusion is that diffusion is easiest in consumer facing products when it involves little to no inconvenience to consumers, and is carried out at the back end, yet results in tangible and visible benefits to consumers, who can then question why other actors in that space are not implementing it. Actors who do not adopt the standard may also potentially face reputational risks on account of non-implementation, and lose out on market share.
Author

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Chetan advises clients on a wide range of domestic and cross-border employment-related matters. He routinely assists US multinationals with employment aspects of entering and doing business in new jurisdictions across the globe, including data privacy compliance, whistleblower policy and hotline implementation, proprietary information and non-compete agreements.
Honorable Mentions

Algorithmic Jim Crow

by Professor Margaret Hu, Washington & Lee University School of Law
Available at: http://ir.lawnet.fordham.edu/flr/vol86/iss2/13/

Executive Summary

This article contends that current immigration- and security-related vetting protocols risk promulgating an algorithmically-driven form of Jim Crow. Under the “separate but equal” discrimination of a historic Jim Crow regime, state laws required mandatory separation and discrimination on the front end, while purportedly establishing equality on the back end. In contrast, an Algorithmic Jim Crow regime allows for “equal but separate” discrimination. Under Algorithmic Jim Crow, equal vetting and database screening of all citizens and noncitizens will make it appear that fairness and equality principles are preserved on the front end. Algorithmic Jim Crow, however, will enable discrimination on the back end in the form of designing, interpreting, and acting upon vetting and screening systems in ways that result in a disparate impact.

The Idea of ‘Emergent Properties’ in Data Privacy: Towards a Holistic Approach

by Samson Y. Esayas, Faculty of Law, University of Oslo, Norwegian Research Center for Computers and Law

Executive Summary

“The whole is more than the sum of its parts.” This article applies lessons from the concept of ‘emergent properties’ in systems thinking to data privacy law. This concept, rooted in the Aristotelian dictum ‘the whole is more than the sum of its parts’, where the ‘whole’ represents the ‘emergent property’, allows systems engineers to look beyond the properties of individual components of a system and understand the system as a single complex. Applying this concept, the article argues that the current EU data privacy rules focus on individual processing activity based on a specific and legitimate purpose, with little or no attention to the totality of the processing activities—i.e., the whole—based on separate purposes. This implies that when an entity processes personal data for multiple purposes, each processing must comply with the data privacy principles separately, in light of the specific purpose and the relevant legal basis.
This (atomized) approach is premised on two underlying assumptions:

(I) distinguishing among different processing activities and relating every piece of personal data to a particular processing if possible, and

(II) if each processing is compliant, the data privacy rights of individuals are not endangered.

However, these assumptions are untenable in an era where companies process personal data for a panoply of purposes, where almost all processing generates personal data and where data are combined across several processing activities. These practices blur the lines between different processing activities and complicate attributing every piece of data to a particular processing. Moreover, when entities engage in these practices, there are privacy interests independent of and/or in combination with the individual processing activities. Informed by the discussion about emergent properties, the article calls for a holistic approach with enhanced responsibility for certain actors based on the totality of the processing activities and data aggregation practices.

Public Values, Private Infrastructure and the Internet of Things: The Case of Automobiles

Deirdre K. Mulligan, Associate Professor in the School of Information at UC Berkeley, and Kenneth A. Bamberger, Professor of Law at the University of California, Berkeley, and Co-Director of the Berkeley Center for Law and Technology


Executive Summary

In July 2015, two researchers gained control of a Jeep Cherokee by hacking wirelessly into its dashboard connectivity system. The resulting recall of more than 1.4 million Fiat Chrysler vehicles marked the first-ever security-related automobile recall. These incidents (and related vulnerability disclosures) reveal the critical security issues of modern automobiles, so-called “connected cars,” and other Internet of Things (IoT) devices, and underscore the importance of regulatory structures that incentivize greater attention to security.

This paper sets forth principles that should inform the agenda of regulatory agencies such as the National Highway Traffic Safety Administration (NHTSA) that play an essential role in ensuring that the IoT, and specifically the OTA update functionality it requires, responds to relevant cybersecurity and safety risks while attending to other public values. It explains the importance of OTA security and safety update functionality in the automotive industry, and barriers to its development. It explores challenges posed by the interaction between OTA update functionality, consumer protections — including repair rights and privacy — and competition. It then proposes a set of principles to guide the regulatory approach to OTA updates and automobile cybersecurity in light of these challenges.
Thank you to our 2017 Reviewers and Finalist Judges:

Submissions received numeric rankings from a diverse team of academics, consumer advocates, and industry privacy professionals from the FPF Advisory Board, with each submission being evaluated for originality; overall quality of writing; and applicability to policy making. For more information, visit fpf.org/privacy-papers-for-policy-makers/.

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Future of Privacy Forum (FPF) is a nonprofit organization that serves as a catalyst for privacy leadership and scholarship, advancing principled data practices in support of emerging technologies.

FPF brings together industry, academics, consumer advocates, and other thought leaders to explore the challenges posed by technological innovation and develop privacy protections, ethical norms, and workable business practices. FPF helps fill the void in the “space not occupied by law” which exists due to the speed of technology development. As “data optimists,” we believe that the power of data for good is a net benefit to society, and that it can be well-managed to control risks and offer the best protections and empowerment to consumers and individuals.