
Symposium

The Big Data Revolution and Its Impact on the Law

Introduction

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The term “Big Data” means different things to different people. For purposes of this discussion, it means both the collection of large amounts of data or information and the ability to analyze it in a meaningful way. As computers have become more powerful and software algorithms have improved, people’s ability to collect and sift through reams of data has dramatically improved. Indeed, computer programs that analyze data have gotten so good that 87% of the American population can be identified with just the person’s date of birth, sex, and the zip code in which the person lives.¹

Just a couple of decades ago, new associates at large law firms would review thousands of pages of documents by looking at hard copies of the documents and turning the pages one by one. They did box after box of document review that way, coding the documents by hand as they went.

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1. See David Parker, Steven Pine, & Zachary Ernst, *Compromise and Barter: Examining Privacy and Informed Consent for Research in the Age of Big Data*, 123 PENN. ST. L. REV. (2019) (contained herein).

In fact, document review comprised a lot of new associates' time. Consequently, thousands of new associates were hired each year with the understanding that document review would comprise one of their primary job responsibilities early in their careers. That is no longer the case. Today, computers can search for terms in documents and code the documents for attorneys. This is just one of the many ways in which Big Data has changed people's lives—attorneys' in this instance—arguably for the better.

Big Data is also being used to alter people's behavior. For example, most people probably have seen at least one of the TV ads in which Allstate Insurance Company and State Farm Insurance Company advertise their safe drivers APPs, Drive Wise and Drive Safe & Save, which promise to give safe drivers premium discounts if they do not drive too fast or brake too hard. These APPs are designed to get people to drive slower and more safely. Indeed, in one State Farm commercial, a pregnant woman on the verge of giving birth comically instructs her husband to slow down while driving her to the hospital in order to preserve her safe driver premium discount.

Insurers, however, also have been using Big Data in ways less laudable than trying to get people to drive more safely in exchange for premium discounts. Instead, insurers use the data to identify the people to whom they do not want to sell insurance because they are deemed too risky or unprofitable.² For example, a few years ago, insurers were refusing to sell life, disability, and health insurance to women who were victims of domestic abuse because insurers concluded such women were likely to have more claims with higher loss values.³ In response, many states passed laws banning such practices because states believed such practices were unlawfully discriminatory.⁴ More recently, insurers have been refusing to sell life and disability insurance to people who are taking an HIV-prevention drug because insurers think those people are high risk people.⁵ The New York Department of Financial Services (DFS) has denounced

2. This phenomenon is known as "reverse adverse selection." See, e.g., Tom Baker, *Containing the Promise of Insurance: Adverse Selection and Risk Classification*, 9 CONN. INS. L.J. 371, 377–379 (2003) (noting that although risk classification is one of the most powerful competitive tools to pricing insurance on an actuarial basis, it can create reverse adverse selection); Max Helveston, *Consumer Data Protection Laws: The Solution for Concerns About Insurer's Big Data Abuse*, 123 PENN. ST. L. REV. (2019) (contained herein).

3. See Baker, *supra* note 2, at 392.

4. *Id.*

5. See Helveston, *supra* note 2.

the practice after determining it violates New York's anti-discrimination laws,⁶ and the State of California opened an investigation into the matter.⁷

Aside from insurers, Big Data has impacted people's lives in other ways as well, particularly since social media has exploded in recent years and a lot of personal information is now shared on social media. Many people may have thought that the information they put on Facebook, for example, was being shared only with their 1000 closest "friends," but the world knows better now. One of the revelations of the 2016 presidential election was that the personal information of at least 50 million people on Facebook allegedly was sold and then analyzed in an attempt to create psychological profiles of the Facebook users with the goal of then sending the person targeted articles or ads with the intention of influencing the person's voting.⁸

These examples of the collection and use of Big Data raise significant issues regarding privacy and people's rights to their own data. Indeed, in a relatively recent survey, 91% of Americans stated they believed they had lost control over how their personal information was collected and used by other entities.⁹ Yet, even with the knowledge that their personal information is being collected, bought and sold, millions of people continue to use Facebook and other social media.¹⁰

People's continued use of social media despite their awareness of the privacy issues, of course, raises the argument that they have consented to such collection and use, either explicitly or implicitly. This, in turn, has led to significant debate among courts and scholars regarding the enforceability of many types of standard form contracts used today in the Internet age wherein users purportedly consent to the terms of use dictated by service providers.¹¹ These agreements may or may not contain

6. See New York State Department of Financial Services, Insurance Circular Letter No. 8, June 22, 2018, <https://www.dfs.ny.gov/about/press/pr1806221.htm>.

7. See California Department of Insurance, *Insurance Commissioner Jones Opens Investigation Into Alleged Denials of Life Insurance Policies for Gay Men Taking HIV/AIDS Prevention Medications*, 2018 Press Release, Feb. 15, 2018, <http://www.insurance.ca.gov/0400-news/0100-press-releases/2018/statement018-18.cfm>.

8. See, e.g., Matthew Rosenberg, Nicholas Confessore, & Carole Cadwalladr, *How Trump Consultants Exploited the Facebook Data of Millions*, N.Y. TIMES (March 17, 2018), <https://www.nytimes.com/2018/03/17/us/politics/cambridge-analytica-trump-campaign.html>.

9. See Parker et al., *supra* note 1.

10. See, e.g., Kate Fazzini, *People say they care about Facebook's privacy scandals, but their actions show they don't — here's what that means for other tech giants*, CNBC (Jan. 31, 2019), <https://www.cnbc.com/2019/01/31/people-say-they-care-about-facebooks-privacy-scandals-but-they-dont.html>.

11. See, e.g., 7 Margaret N. Kniffin, Corbin on Contracts § § 29.10, at 416 (Joseph M. Perillo ed., rev. ed. 2016) ("[T]here is a growing body of case law subverting the traditional duty-to-read concept in adhesion or other standard form contracts, on three different grounds: (1) there was not true assent to a particular term; (2) even if there was assent, the

provisions that state the users consent to the collection and distribution of their personal data. Much scholarship has been written regarding whether users of websites, for example, have truly consented to the terms of use in the traditional way contractual consent is manifested because user “agreements” are non-negotiable, and it is often unclear whether users are even aware of the terms of use, let alone actually agreed to them.¹² The debate on this issue is ongoing, and its importance is further heightened with the rise of Big Data.

On March 22, 2019, the *Penn State Law Review* held a symposium to discuss Big Data and the impact it is having on the law. The symposium was comprised of an eclectic group of legal practitioners, legal scholars, and a student presenting five papers. Those articles are reproduced in this issue of the *Penn State Law Review*.

The first article was written by three Penn State University professors, Anne Toomey McKenna, Amy Gaudion, and Jenni Evans.¹³ McKenna and Gaudion are law professors, and Evans is a Professor of Meteorology and Atmospheric Science. Their article addresses how information that is collected from smart phones and other GPS tracking devices is transmitted to satellites orbiting the earth and can be used and abused. What law governs satellites’ collection and use of the treasure trove of data that people’s smart phones and other GPS tracking devices are transmitting? Their paper addresses that issue and more.

The second article was written by Max Helveston, a law professor at DePaul College of Law.¹⁴ Helveston is an insurance law scholar who has written extensively regarding Big Data’s impact on the insurance industry.

term is to be excised from the contract because it contravenes public policy; or (3) the term is unconscionable and should be stricken. At times, the same decision may employ all three rationales.”) (footnotes omitted)); Mark A. Lemley, *Terms of Use*, 91 MINN. L. REV. 459, 469 (2006) (arguing that the enforcement of wrap agreements has eroded the requirement of assent in the formation of contracts and stating that “the clickwrap and shrinkwrap cases may have conditioned courts to abandon the idea of assent when it comes to browserswraps”); Cheryl B. Preston & Eli McCann, *Llewellyn Slept Here: A Short History of Sticky Contracts and Feudalism*, 91 OR. L. REV. 129, 132 (2012) (“Contract law is now facing a crisis of theory [due to wrap agreements] that requires us to consider how far the balance has been lost and how it must be restored. Contractual liability imposed without knowing assent, with burdensome terms, and without an opportunity to negotiate was anathema to traditional contract law.”); Leon E. Trakman, *The Boundaries of Contract Law in Cyberspace*, 38 PUB. CONT. L.J. 187, 216 (2008) (noting that courts that have refused to enforce wrap agreements have found that “the essential features of a contract and the reasonable opportunity for the purchaser to review and disseminate conditions before acceptance were more fictional than real”).

12. *Id.*

13. Anne Toomey McKenna, Amy C. Gaudion, & Jenni L. Evans, *The Role of Satellites and Our Smart Devices: Data Surprises*, 123 PENN. ST. L. REV. (2019) (contained herein).

14. Helveston, *supra* note 2.

His paper addresses whether current consumer protection laws adequately protect consumers from insurers' potentially abusive use of Big Data when making underwriting and claims handling decisions.

The third article was written by David Parker, Steven Pine, and Zachary Ernst.¹⁵ Parker is of counsel at the law firm of K&L Gates LLP, and Pine and Ernst are associates at the firm. Their practice of law includes, among other areas, health care and medical research. In their article, they focus on individuals' legal rights to privacy with respect to medical data that is used by medical research facilities.

The fourth article was written by James Chen, a Professor of Law at Michigan State University College of Law.¹⁶ Chen is a prolific scholar who writes in numerous areas, but the focus of his research in recent years has been on risk modeling. His article addresses the impact that Big Data analytics, and algorithms in particular, have on the ability to predict business failures.

The final piece, a comment, was written by Ian Logan, a third-year law student at Penn State Law.¹⁷ Logan has a background in film, advertising and entertainment. Apparently, biometric personal data, such as a person's sexual orientation, can be collected from a person's eyes from, among other things, virtual reality headsets when a person is playing video games. Logan's paper addresses whether technology companies should be able to collect such data and then sell it, and whether state or federal law should be the primary regulators of the collection, use, and sale of this type of Big Data.

Collectively, the articles in this symposium issue of the *Penn State Law Review* reveal that Big Data is impacting people's lives in countless ways, both good and bad. Consumer privacy issues and true informed consent loom large with respect to Big Data. Even though many collectors of Big Data often contend consumers have consented to the collection, use, and sale of their personal information, there is little empirical evidence to support the contention that consumers actually know what specific information is being collected, how it is being used, and to whom it is being sold. The law is attempting to address the needs and rights of both consumers and Big Data collectors, but the law often develops retrospectively rather than prospectively, which means it is particularly challenging to balance the competing interests in this rapidly evolving area of the world and law.

15. Parker et al., *supra* note 1.

16. James Chen, *Models for Predicting Business Bankruptcies and Their Application to Banking and Financial Regulation*, 123 PENN. ST. L. REV. (2019) (contained herein).

17. Ian Logan, Comment, *For Sale: The Window to the Soul, Eye tracking as an Impetus for Federal Protection of Biometric Data*, 123 PENN. ST. L. REV. (2019) (contained herein).