The Dilemma of Private Justice Systems:

Big Data Sources, the Cloud and Predictive Analytics

Anjanette H. Raymond[1]

In the age of big data, demanding customer expectations, and increasingly limited access to justice for small claims arising from online sales, business organizations are moving to enhanced online customer complaint platforms and insisting upon increased online justice resolution systems. At the same time, online businesses, even websites you fail to think of as a business, are moving from traditional analytics that provide a snapshot of the past, to solutions that provide an accurate picture of the present and a prediction of future trends. For many, predictive analytics is the wave of the future.

In many ways, the use of predictive analytics is a wonderful occurrence, as our packages will arrive in a more timely manner, our advertising will be more personal and our online and physical lives will be tailored, monitored and adjusted to our interests, life styles and immediate needs without so much as a hiccup. However, what will happen when the current push for private online dispute resolution systems meets the current big data gathering of a private market? Will the private online dispute resolution providers use the information gathered for good, or as a means to quickly resolve disputes without notice of the law, personal rights and/or ethical outcomes? Worse yet, what will happen when the private market of online dispute resolution faces the demands of a business environment that would prefer analytic outcomes to be skewed to favor the business? Bear in mind, these issues do not arise in a prediction, these private online dispute resolution mechanisms already exist and are growing in support and use on a daily basis.

This paper will explore the emerging issue that occurs when private online dispute resolution providers are allowed, without transparency, oversight, or regulation, to create a justice system that knows a lot of personal information about you but is required to follow no legal standard or regulation to resolve your dispute with a merchant.

[1] Assistant Professor of Business Law and Ethics, Indiana University; Adjunct Assistant Professor of Law, Maurer School of Law, Indiana University; Visiting Fellow in International Commercial Law, Centre for Commercial Law Studies, Queen Mary, University of London. The author would like to thank Laura Song for her research assistance. This paper benefitted greatly from the Law and Ethics of Predictive Analytics Colloquium hosted by Virginia Tech, Pamplin College of Business and sponsored by The Center for Business Intelligence and Analytics..

Table of Contents

I. Introduction

The technologies of collection and analysis that fuel big data are being used in every sector of society and the economy,[2] in fact the data collection is ubiquitous.[3] Unsurprisingly, much of the information gathered has to do with consumers, whose information is of high value to businesses seeking to tailor to and seek out customers.[4] As more value is recognized more information is collected[5]—and thus the cycle continues. However, as the White House Report (May 2014) entitled Big Data: Seizing Opportunities, Preserving Values notes:

> It is one thing for big data to segment consumers for marketing purposes, thereby providing more tailored opportunities to purchase goods and services. It is another, arguably far more serious, matter if this information comes to figure in decisions about a consumer's eligibility for—or the conditions for the provision of—employment, housing, health care, credit, or education.[6]

The White House Report highlights five areas of discriminatory impacts that each contains well known stories of information gathering that resulted in negative outcomes for individuals. For example, Facebook information gathering as a pre-employment screening tool appears in numerous news stories so much so that several State legislatures have sought to limit mandatory disclosure of social website passwords.[7] Yet, the White House Report fails to recognize broader institutional discrimination that is

---

[2] See e.g., Europa, EU-Funded Tool To Help Our Brain Deal With Big Data, Europa Press Release, (Aug. 11, 2014) http://europa.eu/rapid/press-release_IP-14-916_en.htm (last visited Aug. 20, 2014)(discussing new research funding into big data in the European Union).

[3] For further discussion, see FEDERAL TRADE COMMISSION, DATA BROKERS: A CALL FOR TRANSPARENCY AND ACCOUNTABILITY (May 2014), http://www.ftc.gov/system/files/documents/reports/data-brokers-call-transparency-accountability-report-federal-trade-commission-may-2014/140527databrokerreport.pdf.

[4] See generally Rachael King, How Dell Predicts Which Customers Are Most Likely to Buy, WALL ST. J., CIO J. (Dec. 5, 2012); Gagan Mehra, Predictive Analytics Is Changing eCommerce & Conversion Rate Optimization Business to Community, (July 27, 2014) (describing the process of using predictive analytics in business).

[5] "The global predictive analytics market, valued at USD 2.08 billion in 2012, is expected to see strong growth at 17.8% CAGR during 2013 to 2019." PRWEB Author, Global Predictive Analytics Market: Analysis, Size, Share, Growth, Trends and Forecast 2013 – 2019, HISPANIC BUSINESS, Aug. 4, 2014, available at http://www.hispanicbusiness.com/2014/8/4/global_predictive_analytics_market_analysis_size.htm.

[6] See WHITE HOUSE, BIG DATA: SEIZING OPPORTUNITIES, PRESERVING VALUES (2014), available at http://www.whitehouse.gov/sites/default/files/docs/big_data_privacy_report_may_1_2014.pdf.

[7] As of May 30, 2014, legislation has been introduced or is pending in at least 28 states, and enacted in Louisiana, Maine (authorizes study), Oklahoma, Tennessee and Wisconsin. See Employer Access to Social Media Usernames and Passwords, http://www.ncsl.org/research/telecommunications-and-information-technology/employer-access-to-social-media-passwords-2013.aspx (last visited Aug. 5, 2014). See generally Ariana R. Levinson, Social Media, Privacy, and the Employment Relationship: The American Experience, SPANISH LABOUR LAW AND EMPLOYMENT RELATIONS JOURNAL (SLLERJ), Vol. 2, No. 1 (2013) (University of Louisville School of Law Legal Studies Research Paper Series No. 2013-08) (discussing the current legislation movement). In fact, Facebook has asked for the practice to be stopped. See Doug Gross, Facebook Speaks Out Against Employers Asking For Passwords, CNN (Mar. 12, 2012). Federal legislation has, however, stalled. See Sara Gates, CISPA Amendment Banning Employers From Asking For Facebook

likely to occur and which will undoubtedly impact each of the listed areas and many more. For example, the White House Report fails to recognize the very real possibility that information gathering will impact individuals within the justice system. And while full justice system impacts are too large for this paper, one area of justice provision—private justice providers in online communities—needs to be considered immediately as the private providers are already gathering data, building justice platforms and adjusting negotiation and outcome algorithms based on information gathering.[8] Yet, few regulations exist as it relates to private justice providers[9] and no regulation delineates how a private provider of justice can use individually tied data within the alternative justice process. Can the amalgamation of information be used to suggest mediated settlement points to be offered to the harmed individual? What if the information is not of the generalized type, what if the settlement point is offered based on specific characteristics of the particular specific individual? What if the settlement offer is far below what would be allowed within the traditional brick and mortar justice system? And most relevant to this paper, what if all of the suggested resolutions, information provided, and settlement offer points are all done through the use of technology and a non-transparent predictive algorithm? The likelihood of this occurring is closer than one might think.

This paper will explore the emerging issue that occurs when private online dispute resolution providers are allowed, without transparency, oversight, or regulation, to create a justice system that knows a lot of personal information about you but is required to follow no legal standard or regulation to resolve your dispute with a merchant. The paper will first, examine the use of analytics and predictive analytics within the commercial environment. Second, the paper will describe the current use of technology in the justice system and will briefly explain prior uses of artificial intelligence (AI) in the justice environment. Next, the paper will suggest the growth of online dispute resolution has led to the gathering of data that could be used within a justice-based predictive analytics model. And finally, the paper will identify and explore the ethical issues involved with such uses and will suggest minimalistic regulation is needed to prevent widespread misuse of online dispute resolution.

Passwords Blocked, HUFFINGTON POST (Apr. 23, 2013). See also Staff Author, Forty-five Percent of Employers Use Social Networking Sites to Research Job Candidates, CareerBuilder Survey Finds, CAREER BUILDER (Aug. 2009); Kit Eaton, If You're Applying for a Job, Censor Your Facebook Page, FAST COMPANY.

[8] See infra notes 66-68. This trend exists in other countries as well. See, e.g., Tania Sourdin & Chinthaka Liyanage, The Promise and Reality of Online Dispute Resolution in Australia, in ONLINE DISPUTE RESOLUTION THEORY AND PRACTICE (Mohamed Abdel Wahab, Ethan Katsh & Daniel Rainey eds., Eleven International Publishing 2013), available at https://www.mediate.com/articles/ODRTheoryandPractice21.cfm.

[9] See generally Anjanette H. Raymond, It's Time the Law Begins to Protect Consumers from Significantly One-Sided Arbitration Clauses within Contracts of Adhesion, 91 NEB. L. REV. 666 (2013).

II. The Growing Use of Analytics

In 2012 the now infamous case of Target's marketing blunder became a flash point for data mining and predictive analytics world-wide.[10] Seems Target gathers a lot of information about its customers (more on that later). And while gathering data is really nothing new, Target rose to new levels when it was able to begin to use shopping patterns and new shopping locations as a means to predict life events.[11] Target, as many retailers would,[12] recognized a good thing and began targeting individuals for coupons and other communications based upon the assessed life event.[13] Fortunately—or unfortunately, depending on the side you are on—Target was very good at predicting pregnancy. In one of its targeted marketing campaigns, Target identified an individual as pregnant and began sending pregnancy coupons for items associated with early stages of pregnancy.[14] The identified individual; however, was a teenager, that had yet to tell her parents that she was unexpectedly pregnant.[15] Target had accidently told the parents something that was really not their information to share.

Target is not alone in gathering data, for decades retailers have collected vast amounts of data on every person who regularly walks into one of its stores.[16] Data collection has risen to a new level as people shift to an expanding online world as highly powerful computers—coupled with our willingness to basically populate the databases ourselves with our digitally connected behavior[17]—makes data gathering[18] ubiquitous and makes data mining[19] a whole new discipline.[20]

---

[10] *See* Kashmir Hill, *How Target Figured Out A Teen Girl Was Pregnant Before Her Father Did*, FORBES ONLINE (Feb. 16, 2012, 11:02 AM), http://www.forbes.com/sites/kashmirhill/2012/02/16/how-target-figured-out-a-teen-girl-was-pregnant-before-her-father-did/.

[11] *See* Charles Duhigg, *How Companies Learn Your Secrets*, N.Y. TIMES, Feb. 16, 2012, http://www.nytimes.com/2012/02/19/magazine/shopping-habits.html?pagewanted=all.

[12] *See e.g.*, Danny Wajcman, 4 Ways To Collect Data Without Losing Customer Trust, StreamFeed (Aug. 12, 2014)(discussing the growing use of analytics).

[13] *See* Hill, *supra* note 10.

[14] *See id.*

[15] *See id.*

[16] *See* Stephanie Clifford, *Attention, Shoppers: Store Is Tracking Your Cell*, N.Y. TIMES, July 14, 2013, http://www.nytimes.com/2013/07/15/business/attention-shopper-stores-are-tracking-your-cell.html?pagewanted=all&_r=0.

[17] *See* Kathleen Hall, *Gathering Retail Intelligence*, COMPUTER WEEKLY (Sept. 2012), http://www.computerweekly.com/feature/Gathering-retail-intelligence.

[18] Google is obviously the best example of the widespread use of online information gathering. *See* BBC Staff Author, *Google Halts Student Gmail Advertisement Scans*, BBC NEWS ONLINE (Apr. 30 2014, 08:55 AM), http://www.bbc.com/news/technology-27223079.

[19] *Data mining* is an analytic process designed to explore data (usually large amounts of data—typically business or market related—also known as "big data") in search of consistent patterns and/or systematic relationships between variables, and then to validate the findings by applying the detected patterns to new subsets of data.

For example, Target assigns each shopper a unique code—known internally as the Guest ID number—that keeps tabs on everything that he or she buys.[21] As highlighted by New York Times reporter Charles Duhigg interviewing Andrew Pole an employee within Target's Guest Marketing Analytics department:

> If you use a credit card or a coupon, or fill out a survey, or mail in a refund, or call the customer help line, or open an e-mail we've sent you or visit our Web site, we'll record it and link it to your Guest ID . . . . We want to know everything we can.[22]

Based on your shopping habits, locations of shopping, and items bought, retailers can[23] and will, with a high level of accuracy discern many key pieces of personal information.

> Also linked to your Guest ID is demographic information like your age, whether you are married and have kids, which part of town you live in, how long it takes you to drive to the store, your estimated salary, whether you've moved recently, what credit cards you carry in your wallet and what Web sites you visit.[24]

And of course, retailers—and many others can easily purchase your information from one of the many consumer and business lists[25] that gather and compile information from various and numerous information sources.[26]

> Target can buy data about your ethnicity, job history, the magazines you read, if you've ever declared bankruptcy or got divorced, the year you bought (or lost) your house, where you went to college, what kinds of topics you talk about online, whether you prefer certain brands of coffee, paper towels, cereal or

---

[20] See e.g., Molly Wood, A New Kind of E-Commerce Adds a Personal Touch, THE NEW YORK TIMES, (Aug. 13, 2014)(discussing personalized shopping)

[21] Duhigg, supra note 11, at 1. Of course Target is not alone in this practice. See David Lazarus, Businesses Gather More Information Than They Need From Consumers, L.A. TIMES, Jan. 30, 2014, http://articles.latimes.com/2014/jan/30/business/la-fi-lazarus-20140131.

[22] See id. at 1.

[23] See e.g., WIPRO Author, Manufacturing and the Data Conundrum, WIPRO Website http://www.wipro.com/microsite/manufacturing-analytics/ (last visited Aug. 20, 2014)(discussing the use of analytics as a competitive advantage in sales and manufacturing).

[24] See id. For example, Acxiom is a huge data broker. See ACXIOM, http://www.acxiom.com.

[25] Such as Experian, see http://www.experian.com/small-business/mailing-lists.jsp and Direct Mail see http://www.directmail.com/ and InfoUSA see http://www.infousa.com/.

[26] For example, Facebook not only gathers but shares your information—basically to anyone that pays for it. See Leo Kelion, Facebook Launches Mobile Ads Audience Network, BBC NEWS ONLINE (May 1, 2014), http://www.bbc.com/news/technology-27230468. See also, FEDERAL TRADE COMMISSION, DATA BROKERS: A CALL FOR TRANSPARENCY AND ACCOUNTABILITY (May 2014), http://www.ftc.gov/system/files/documents/reports/data-brokers-call-transparency-accountability-report-federal-trade-commission-may-2014/140527databrokerreport.pdf.

> applesauce, your political leanings, reading habits, charitable giving and the number of cars you own.[27]

But big data and even specific data attributable to an individual is useless without understanding the data. Keeping to the Target example, Target has identified about 25 products that, when analyzed together, allowed Target to assign a "pregnancy prediction" score.[28]

> Take a fictional Target shopper named Jenny Ward, who is 23, lives in Atlanta and in March bought cocoa-butter lotion, a purse large enough to double as a diaper bag, zinc and magnesium supplements and a bright blue rug. There's, say, an 87 percent chance that she's pregnant and that her delivery date is sometime in late August. [29]

That prediction, in and of itself is an amazing use of data,[30] complex data analysis[31] and predictive analytics. But really, it merely touches the surface of prediction. Consider what can happen if the current shopping pattern is added to a vast treasure trove of other readily available information.

> What's more, because of the data attached to her Guest ID number, Target knows how to trigger Jenny's habits. They know that if she receives a coupon via e-mail, it will most likely cue her to buy online. They know that if she receives an ad in the mail on Friday, she frequently uses it on a weekend trip to the store. And they know that if they reward her with a printed receipt that entitles her to a free cup of Starbucks coffee, she'll use it when she comes back again.[32]

Using predictive analytics to shape future behavior is a skill that we all should consider the future of retail.[33] The proprietary algorithms used are of such a high value that companies guard the formula and

---

[27] Duhigg, supra note 11, at 1. Some commentators argue that data brokers should be regulated. See, e.g., Kate Kaye, FTC Asks for Data Broker Law and Central Hub for Consumer Control, ADVERTISING AGE (May 2014), http://adage.com/article/privacy-and-regulation/ftc-data-broker-law-central-hub-consumers/293422/ (referencing the FTC report A Call for Transparency and Accountability).

[28] See Duhigg, supra note 11, at 9. The Target Pregnancy prediction score is highly accurate. For an explanation, see Keith Wagstaff, How Target Knew a High School Girl Was Pregnant Before Her Parents Did, TIME (Feb. 17, 2012), http://techland.time.com/2012/02/17/how-target-knew-a-high-school-girl-was-pregnant-before-her-parents/.

[29] See Duhigg, supra note 11, at 9.

[30] The use of data this way is also known as profiling. Profiling generally means extrapolation of information on the Internet by the process of computer—generated information gathering and subsequent construction and application of profiles.

[31] Complex data should be distinguished from big data.

[32] See Duhigg, supra note 11, at 9.

[33] In fact, tracking company Acxiom claims to have 1,500 data points on each individual, which are then used to slot individuals into socioeconomic clusters. See Scott Alexander, Demand for Privacy Will Kill the Free Internet. Thank Goodness, POPULAR SCIENCE, June 2014, at 25.

calculations through highly complex secrecy and confidentiality terms and patents.[34] These same algorithms are vital to most customers' experiences on the internet.[35] For example, Google's famous PageRank algorithm counts the number of links to a page and assesses their quality to determine how important a website is.[36] The quality and quantity of websites' links to each other are compared and ordered; the more important websites are displayed first on the Google search page when a search query is entered.[37] And of course, it is well known that Facebook uses an algorithm and has manipulated the algorithm to influence the posts a user sees on his or her news feed.[38] While Amazon's algorithms constantly work behind the scenes to make recommendations of what books that you might like to buy often based on what your friends have bought.[39] Of course, all of these algorithms perform a function that could have been done with paper and pencil (and a lot of hard work) previously, the key to the use of technology is that the newest algorithms help to order and arrange vast volumes of data at a scale and speed impossible for a human, making the users interactive experience seamless and non-intrusive.

Many consider it a blessing that advertisements can be directed and tailored to the individual instead of bulk mails and communications that clog inboxes and mailboxes worldwide.[40] And the use of algorithms

---

[34] One such example, Versium, claims to offer proprietary data matching technologies. See VERSIUM, http://versium.com/ (last visited Aug. 5, 2014). While Wolverine Execution Services (WEX) algorithms provide simple, yet extremely effective ways to source liquidity in equities, futures, and options. See WEX, http://www.tradewex.com/Execution/Algorithms (last visited Aug. 5, 2014).

[35] See Dylan Love, 11 Essential Algorithms That Make The Internet Work, BUSINESS INSIDER, Aug. 9, 2011 (explaining the use of internet algorithms).

[36] See GOOGLE PAGERANK, https://support.google.com/toolbar/answer/79837?hl=en. A recent European court decision has interpreted the 'right to be forgotten' as a mandate for Google to delete search result when requested by the individual. See Rich Trenholm, Google Must Delete Search Results On Request, Rules EU Court, C/NET (May 13, 2014), http://www.cnet.com/news/google-must-delete-search-results-rules-european-court/.

[37] See Jamie Bartlett, Google, Facebook, Amazon: Algorithms Will Soon Rule Our Lives So We'd Better Understand How They Work, TECH BUSINESS, THE TELEGRAPH (Apr. 29, 2014), http://blogs.telegraph.co.uk/technology/jamiebartlett/100012905/google-facebook-amazon-algorithms-will-soon-rule-our-lives-so-wed-better-understand-how-they-work/.

[38] See id. See also, Robinson Meyer, Everything We Know About Facebook's Secret Mood Manipulation Experiment, The Atlantic, (June 28, 2014)(discussing the use of the Facebook algorithm to conduct social experiments).

[39] See Bartlett, Google, Facebook, Amazon, supra note 33. Sometimes called 'trusted curation' or 'content curation' the term basically means that out of all the content you find on the social web—you pass on the most valuable stuff to your network. Many commentators believe that a large amount of information is gathered via circles of trust. Tapping into these circles is thought to be the future as highlighted by Mark Cuban on the April 18, 2014 episode of Shark Tank episode. See Marco Santana, Mark Cuban invests in Iowa Native's Startup, THE DES MOINES REGISTER, Apr. 23, 2014, http://www.desmoinesregister.com/story/tech/2014/04/22/billionaire-cuban-invests-in-iowa-native-startup/8014739/.

[40] In fact, data from the JiWire Mobile Audience Insights Report Q4 2011 indicates that 80% of mobile consumers prefer ads that are locally relevant to them, and three-quarters of consumers have taken action in response to a location-specific message. Marketing Charts Staff, 1 in 5 Mobile Users Recently Scanned QR Code, MARKETING CHARTS (Feb 2012), http://www.marketingcharts.com/wp/online/1-in-5-mobile-users-recently-scanned-qr-code-21145/. JiWire is a leader in mobile analytics. See JIWIRE, http://www.jiwire.com/advertisers/location-graph/.

combined with advancing level of automation has the potential to greatly reduce human error and lessen the impact of emotion in a decision making process.[41] For example, the University of California San Francisco's Medical Centre uses an algorithmically operated robot to run a fully automated hospital pharmacy[42] while forensic accounting and other financial analysis techniques are fully operational in assisting in the detection of business manipulation of disclosed information[43] and protection from credit card fraud and identity theft.[44] Most recently, Emerald Logic claims it uses an evolutionary process to discover the best algorithm for predicting outcomes from any dataset.[45] Clearly, big data, complex data, analytics and predictive algorithms are advancing at such a swift rate that algorithms will begin to impact most areas of our lives.

That is not to write that the process is without its critics. Of course, the primary criticism relating to 'big data' is the sheer amount of information gathered[46] and the manner in which the data is used.[47] In January of 2014, President Obama started a federal review intended to examine the impact of big-data technologies and whether they might pose new kinds of privacy intrusions into how people live and work.[48] MIT president Dr. Rafael Reif highlights the issue: "How can we harness this flood of data to generate positive change—without destroying the very idea of privacy?"[49] While privacy is not the major influencing criticism of this paper, the importance of the topic demands that the need to protect privacy is never far from the minds of commentators (or this author). An issue that even Facebook has begun to

[41] See Martin Eiermann, (interview of Christopher Steiner) Innovation is a Social Issue, THE EUROPEAN (June 26, 2013), http://www.theeuropean-magazine.com/christoper-steiner/7226-algorithms-and-the-future-of-work.
[42] See Karin Rush-Monroe, New UCSF Robotic Pharmacy Aims to Improve Patient Safety, UCSF (March 2011), http://www.ucsf.edu/news/2011/03/9510/new-ucsf-robotic-pharmacy-aims-improve-patient-safety.
[43] See Messod D. Beneish, Predicting Firms that Manipulate Disclosed Earnings, ON ANALYTICS, KELLEY SCHOOL OF BUSINESS (Spring 2014).
[44] One example has been implemented on Amazon, but many more exist. See Fraud Protection, AMAZON, http://webstore.amazon.com/Fraud-Protection/b/6368798011.
[45] See Derrick Harris, This Startup Says It Can Find The Algorithm That Defines Your Data, GIGAOM (Apr. 19, 2014), http://gigaom.com/2014/04/09/this-startup-says-it-can-find-the-algorithm-that-defines-your-data/.
[46] See Dylan Love, Your iPhone Gathers A Lot More Of Your Location Data Than You Thought — Here's How To Disable It, BUSINESS INSIDER (Apr. 30, 2014, 2:05 PM), http://www.businessinsider.com/iphone-frequent-locations-2014-4#ixzz30ZFzYCts.
[47] See Felix Salmon, Numbered by Numbers: Why Quants Don't Know Everything, WIRED (Jan. 2014).
[48] See Natasha Singer, Big Data Means Big Questions on How That Information Is Used , N.Y. TIMES (Mar. 3 2014), http://bits.blogs.nytimes.com/2014/03/03/big-data-means-big-questions-on-how-that-information-is-used/?_php=true&_type=blogs&_r=0.
[49] See id.

recognize as it has just recently introduced an anonymous log in that will allow you to use your Facebook account to log-in to other sites and apps anonymously.[50]

One should also note, while many commentators agree that data gathering, algorithms and other predictive tools are advancing, many argue that some decision processes are years away from accurate prediction. For example, in 2009 Netflix offered a prize to anyone who could create an algorithm to solve the following problem: "Given a list of movies someone likes, successfully predict other movies he or she will like."[51] While Netflix did award the prize,[52] ultimately the predictive algorithm has gone unused. Netflix faced a predictive dilemma known as second-order complexity, the idea that sometimes, we like things that are different.[53] Even more complex is the human condition of never remaining static in our moods, opinions or current interests.[54] Most relevant to the paper topics is the inability of algorithms to account for the spontaneous discovery of new things, ideas and options that are otherwise not presented when selection is limited through predictive algorithms.[55]

III. Justice, Analytics and Artificial Intelligence

The issues of data gathering, data sharing, non-transparent algorithms and predictive analytics will begin to push ethical debate in many areas. At this point it should be clear that these events are almost ubiquitous in our daily lives. What many readers may not be aware of, however, is the use of these same processes, techniques and applications in the world of dispute resolution. The widespread use of these technology tools as well as the growing use of predictive analytics will soon touch upon one of our most fundamental rights—access to justice. This section will highlight key technology advancements within the justice system, will explain the uses of technology within online dispute resolution (ODR) while highlighting major players in the areas, and will conclude by explaining the potential use of AI in the justice system as a means to demonstrate the technology behind predictive analytics in ODR already exists.

---

[50] See Kashmir Hill, Why Facebook's New 'Anonymous Login' Matters, FORBES (May 1, 2014), http://www.forbes.com/sites/kashmirhill/2014/04/30/why-facebooks-new-anonymous-log-in-matters/.
[51] See NETFLIX, http://www.netflixprize.com/.
[52] See id.
[53] See Ben Hayden, Can a Computer Know You Better Than You Know Yourself?, DECISION TREE, PSYCHOLOGY TODAY (Mar. 16, 2014), http://www.psychologytoday.com/blog/the-decision-tree/201403/can-computer-know-you-better-you-know-yourself.
[54] See id.
[55] See id.

A. The Origins of Analytics and Justice

Technology has been employed within the justice system for some time now. E-filing of court documents[56] and the searching of those, and other, public records have been available at both the federal and local levels for a good deal of time. And of course, video and similar technology, computers in the court room and email communications with court and other personnel seem so commonplace that it is almost humorous to imagine a day when digital communications were not used within the justice system. For many, what may not be well known is the use of analytics within the justice system.

It should surprise no one that the use of digital communications, submission and storage means a wealth of information is now available to be used as a data set for analysis. For example, most lawyers are aware of the use of basic algorithm based searching within large amounts of digital communication, commonly known as e-discovery. The request for e-discovery documents and the shear volume of the information is causing serious issues within the litigation process as the amount of information contained in electronic form has exploded.[57] Software and search based algorithms have been used to search, compile and categorize this vast amount of electronic information into an accessible amount of information that litigators hope will ultimately be helpful to advance their case. Case in point, in 2000 a discrimination case included a demand for production resulting in the production of over 20 million electronic documents.[58] In the end, the litigant relied upon ten e-mails to make their point.[59]

Many will likely be familiar with the growing use of technology in the litigation process. For example, focus group research allows selected participants to react to key pieces of information, this information is compiled within a database and then used as one aspect to assist in the prediction of how certain issues may be perceived and decided by jurors.[60] While witness research now involves more than mere

---

[56] Systems such as PACER within the Federal Court System. See PACER, http://www.pacer.gov/.

[57] See Robert Hardaway, Dustin D. Berger & Andrea DeField, E-Discovery's Threat to Civil Litigation: Reevaluating Rule 26 for the Digital Age, 63 RUTGERS L. REV. 521 (2011), available at http://ssrn.com/abstract=1693030.

[58] See id. at 530.

[59] See id.

[60] For example, see Stacy Moody McHenry, The Response Of Mock Jurors To Psychological Testimony Presented In Two Adversarial Trials Conducted By Practicing Attorneys 6025 (Jan. 1, 2002) (Dissertation, Fordham University), available at http://fordham.bepress.com/dissertations/AAI3037224/; Vincent Vindice, Expert Witness Testimony By Psychologists: A Survey Of Judges, Jurors And Lawyers 5659 (1997) (Dissertation, Antioch University), available at http://www.antiochne.edu/dissertations/expert-witness-testimony-by-psychologists-a-survey-of-judges-jurors-and-lawyers/.

resume verification and now includes social media searches and blog post searching.[61] And data gathering in key areas such as venue research,[62] community surveys[63] and judicial decision studies allow information to be used in the presentation of mock trials and similar devices that further gather and compile trial strategy information.[64] Yet, each of these aspects of litigation and trial strategy has now moved into the technology based world, with specialty litigation experts using analytics to make recommendations about almost all areas of litigation strategy.[65]

Most importantly, the current uses of technology, data gathering, and analytics within the justice system has become a flash point of debate in the criminal justice system as more and more police departments begin to use data mining and predictive analytics for tactical crime analysis,[66] risk and threat assessment,[67] behavioral analysis of violent crime,[68] and proactive deployment strategies.[69] Yet, as the

---

[61] In fact, an entire institute exists at the University of Alabama, specifically examining witness research (and similar activities). See Witness Research Lab, THE UNIVERSITY OF ALABAMA, http://witnesslab.ua.edu/members.html (last visited Aug. 5, 2014).

[62] For example, Research Design Associates claims to be able to evaluate both the original trial location and/or the new venue to "allow for eventual trial success." Of course, the key as it relates to this paper is that they can do the evaluation at all. An examination of the website highlights many other services offered in a similar vein. See RESEARCH DESIGN ASSOCIATES, http://researchdesignassociates.com/litigation-support-services-change-of-venue.html (last visited Aug. 5, 2014).

[63] The Bureau of Justice Assistance argues that "Community surveys can give planners a detailed picture of a community's priorities, expectations, and self-image." See Community Surveys, BUREAU OF JUSTICE ASSISTANCE, https://www.ncjrs.gov/html/bja/197109/pg2.html (last visited Aug. 5, 2014).

[64] See DECISION ANALYSIS TRIAL CONSULTANTS, http://www.decisionanalysisinc.com/what-we-do/research/.

[65] See Lior Strahilevitz, Reputation Nation: Law in an Era of Ubiquitous Personal Information, 102 NORTHWESTERN UNI. L. REV. 167 (2008), available at http://ssrn.com/abstract=1028875.

[66] See, e.g., William Bratton, John Morgan & Sean Malinowski, LAPD Research Paper "Fighting Crime in the Information Age: The Promise of Predictive Policing," PUBLIC INTELLIGENCE, Nov. 2009; Jessica Renee Napier, Data Analytics Help Michigan Police Cut Crime, Solutions for State and Local Government, TECHNOLOGY (July 30, 2013) (discussing local results); DR. JENNIFER BACHNER, IBM CENTER FOR BUSINESS AND GOVERNMENT, PREDICTIVE POLICING: PREVENTING CRIME WITH DATA AND ANALYTICS (2013), available at http://www.businessofgovernment.org/sites/default/files/Predictive%20Policing.pdf. And of course, software predicts where accidents are likely to occur. See, e.g., Shelly Bradbury, Software predicts when, where serious accidents are most likely to occur on Tennessee highways, TIME FREE PRESS, Aug. 1, 2014.

[67] See, e.g., JOHN M. KAMENSKY, IBM CENTER FOR BUSINESS AND GOVERNMENT, PREDICTIVE ANALYTICS: HOW TO PREVENT CRIME FROM HAPPENING (2013).

[68] Operated by the FBI, the National Center for the Analysis of Violent Crime is but one unit that analyzes violent behavior to make predictions for future actions/response. See National Center for the Analysis of Violent Crime, FBI, http://www.fbi.gov/about-us/cirg/investigations-and-operations-support/investigations-operations-support (last visited Aug. 5, 2014).

[69] See Colleen McCue, Connecting the Dots: Data Mining and Predictive Analytics in Law Enforcement and Intelligence Analysis, POLICE CHIEF MAGAZINE, Apr. 2014, available at http://www.policechiefmagazine.org/magazine/index.cfm?fuseaction=display_arch&article_id=121&issue_id=102003.

system begins to become more comfortable with the use of technology few have really considered predictive analytics within the adjudication portion of the justice system.

B. Online Dispute Resolution

The current uses of technology, data gathering, storage, and analysis in litigation pale in comparison to technology as an influencing participant in the dispute resolution process. The online community is pushing into a full-fledged virtual court system that uses analytics and other forms of technology to resolve disputes without human intervention. Online dispute resolution (ODR) is not a new phenomenon; in fact, it has been discussed in literature for some time now.[70] The ability to resolve disputes online seems like a natural next step of e-commerce as individuals become more reliant and comfortable with shifting major portions of their lives online, especially shopping even in a global environment. Yet, the definition of and specific attributes essential to ODR are elusive. Thus, I shall divide ODR into three very broad categories: (1) Basic communication, filing, storage and similar functions performed online, (2) assisted negotiations and similar platforms/websites that use technology within and as a participant in the process, and (3) full on dispute resolution within the online world.[71] The last and most recent evolution of ODR shall be explored in its own section that being the use of artificial intelligence and other analytics and predictive tools within dispute resolution.

At the most basic level, online dispute resolution providers can use technology to facilitate the process of communications, without actually influencing the parties or the decision-making process. In these types of systems, technology is used as a means to facilitate a better, easier to use and more cost effective communication process, but the technology does little else.[72] For example, Settle Today allows for online submission of information and electronic communications (if needed), but the final result is

[70] See, e.g., Charlie Beck, Predictive Policing: What Can We Learn from Wal-Mart and Amazon about Fighting Crime in a Recession?, POLICE CHIEF MAGAZINE, July 2014, available at http://www.policechiefmagazine.org/magazine/index.cfm?fuseaction=display_arch&article_id=1942&issue_id=112009; Colleen McCue, Connecting the Dots: Data Mining and Predictive Analytics in Law Enforcement and Intelligence Analysis, POLICE CHIEF MAGAZINE, July 2014.

[71] The separation is more fully advanced in Anjanette Raymond and Scott Shackelford, Technology, Ethics and Access to Justice: Should an Algorithm Be Deciding Your Case?, 35 MICH. J. INT'L L. 101, Section 3.1 (forthcoming Summer 2014) (describing the lack of definition and proscribing categories).

[72] This type of communication system has advanced in recent years making the use of the system much more seamless. For example, on May 12, 2014 the Associated Press detailed in a story the 'new' use of communication technology that allows for people to see doctors via webcam. See Associated Press Author, The Doctor Will See You Now Via Webcam, Smartphone, AP NEWS (May 12, 2014), http://m.apnews.com/ap/db_268744/contentdetail.htm?contentguid=jCHaKjLA.

provided by a 'live resolution facilitator.'[73] In essence providing an online platform to perform what could otherwise be provided in face-to-face meetings. And the newest participant, eQuibbly has recently updated its ODR platform to allow for parties to submit their dispute—without a prior existing alternative dispute resolution (ADR) agreement[74]—to an online judge (arbitrator) that accepts online submissions of information, communicates to the parties within a virtual dispute room and ultimately delivers his/her final judgment.[75] Both serve as an excellent example of the use of technology to remove barriers created by the need to physically appear in a brick-and-mortar courtroom or alternative dispute resolution provider's administrative office.

Another example of technology put to good use exists in the platforms that are designed to use a process known as automated negotiation which allows the parties to submit an amount of money acceptable to them to settle the dispute. The process goes back-and-forth, often without the platform revealing the other party's settlement point—until the system recognizes settlement offers within a predetermined range at which point the technology automatically settles the dispute in the midpoint of the two offers. One of the best known examples Cybersettle has surpassed the basic automated negotiation platform. Originally a platform designed to handle insurance related disputes,[76] Cybersettle has now expanded into the area of online payment for settling your medical bills.[77] Cybersettle uses a blind bid system (as described above) to initiate the settlement. Should that round of bidding fail to produce a result, the parties move into what Cybersettle designates a 'Power Round' which involves additional bidding and the knowledge of the other bids submitted.[78] Online negotiation involves more than blind-bidding, however, with technology being used in increasing areas of influence.[79] Platforms

---

[73] See SETTLE TODAY, http://www.settletoday.com/systemdemo.php.
[74] Both Parties sign an agreement online to submit the case to a Judge on eQuibbly for a legally-binding decision.
[75] See EQUIBBLY, https://www.equibbly.com/how_online_arbitration_works.
[76] See CYBER SETTLE, http://www.cybersettle.com/.
[77] See Robert Glatter, PayMD: An Online Solution To Settling Your Medical Bills, FORBES (Dec. 12, 2013), http://www.forbes.com/sites/robertglatter/2013/12/06/paymd-an-online-solution-to-your-settling-your-medical-bills/3/.
[78] Patent 6,954,741 description available at the Cybersettle website. See http://www.cybersettle.com/images/downloads/Cybersettle_Patent_List_Feb_2013.pdf.
[79] Some assert technology is a forth participant in the process. See, e.g., Daniel Rainey, Mediator Ethics and the Fourth Party, ACRESOLUTION MAGAZINE, June 2014, at 11 (discussing technology as the fourth party); E. Katsh and J. Rifkin, ONLINE DISPUTE RESOLUTION: RESOLVING CONFLICTS IN CYBERSPACE (Jossey-Bass 2001); ETHAN KATSH, ODR: A LOOK AT HISTORY – A FEW THOUGHTS ABOUT THE PRESENT AND SOME SPECULATION ABOUT THE FUTURE CONTAINED IN ONLINE DISPUTE RESOLUTION: THEORY AND PRACTICE A TREATISE ON TECHNOLOGY AND DISPUTE RESOLUTION (Mohamed S. Abdel Wahab, Ethan Katsh & Daniel Rainey eds., 2012).

designed as eNegotiation websites use technology to overcome negotiation biases.[80] For example, Smartsettle is a multiparty eNegotiation system that uses algorithms to assist parties in clarifying tradeoffs and understanding both quantitative and qualitative issues to overcome conflicting objectives.[81]

In the public sector, justice systems have also taken note of the increasing interest in the use of online dispute resolution platforms. For example, the British Columbia Civil Resolution Tribunal offers an online dispute resolution system that facilitates communications between the parties in a monitored platform.[82] If no result can be achieved, mediation will be available through phone, Skype or email.[83] Ultimately, if all else fails, an adjudicator intervenes to determine the outcome of the case.[84] And the Dutch courts have developed a prototype for a platform for neighbor disputes supporting diagnosis, negotiation, legal information and adjudication.[85] A similar system, designed by a private enterprise Modria[86] is used by the property assessor's office in New Orleans, Louisiana, and others, to allow the online appeal of property assessments.[87]

Technology is advancing at such a rapid rate, that online submission, storage, communication and adjudication of disputes is now moving into the direction of the technology providing assistance in the negotiation process itself, including the development of negotiation strategy. For example, SquareTrade uses assisted negotiation in which the technology assists and encourages the parties to work through a certain process and/or to provide the parties with specific (evaluative) advice.[88] Noted ODR authority Professor Rabinovich-Einy, highlights SquareTrade's technology: "[the platform] intervenes in the

---

[80] See, e.g., PAUL MINIATO, SMARTSETTLE, "GETTING TO YES" ON ODR TECHNOLOGY (2010) (discussing eNegotiations and the ability to overcome pre-existing personal biases); ERNEST THIESSEN, PAUL MINIATO & BRUCE HIEBERT, ODR AND ENEGOTIATION IN ONLINE DISPUTE RESOLUTION: THEORY AND PRACTICE A TREATISE ON TECHNOLOGY AND DISPUTE RESOLUTION (Mohamed S. Abdel Wahab, Ethan Katsh & Daniel Rainey eds., 2012).

[81] See SMART SETTLE, http://www.smartsettle.com/home/resources/articles/.

[82] See Press Release, British Columbia Ministry of Justice, Online civil dispute tools to save time, money (May 7, 2012), http://www2.news.gov.bc.ca/news_releases_2009-2013/2012JAG0068-000600.htm (received Royal Assent May 31, 2012).

[83] See Civil Resolution Tribunal Act, BRITISH COLUMBIA MINISTRY OF JUSTICE, http://www.ag.gov.bc.ca/legislation/civil-resolution-tribunal-act/index.htm.

[84] Process described in full at http://www.innovatingjustice.com/blogs/online-courts.

[85] See Maurits Barendrecht, Online courts imminent, INNOVATING JUSTICE FORUM (Aug. 2013), http://www.innovatingjustice.com/blogs/online-courts.

[86] See MODRIA, http://www.modria.com/government/.

[87] See New Orleans Assessors Announcement, https://nolaassessor.modria.com/.

[88] SquareTrade no longer operates as an ODR website, thus historical accounts must be used. For a discussion, see Orna Rabinovich-Einy & Ethan Katsh, Lessons from Online Dispute Resolution for Dispute Systems Design, in ONLINE DISPUTE RESOLUTION: THEORY AND PRACTICE A TREATISE ON TECHNOLOGY AND DISPUTE RESOLUTION (Mohamed S. Abdel Wahab, Ethan Katsh & Daniel Rainey eds., 2012).

negotiations between the parties and, by allowing parties to formulate and reformulate the problem and the solution, performs some of what would be associated with a mediator's role, moving the parties from a problem mode to a solution stance."[89] In a similar manner as the telephone salesman or help desk associate, technology is able to follow a script based upon and in response to positions taken, statements made and offers declined to move the parties past a conflict-based stance and into a solution-focused stance.

As this technology continues to develop, less and less human intervention will be required within the process resulting in very little human intervention. For example, eBay has long used a dispute resolution system within its platform that allows buyers and sellers to resolve disputes within the community based website.[90] Interestingly, the eBay system also allows for parties that fail to agree on a resolution to refer their dispute to a neutral third party.[91] In these instances, the third party neutral reviews the prior submissions, asks questions and ultimately resolves the issue. The eBay platform serves as more than a great example of an ODR platform that generally works, it also serves as an example of the use of community based platforms in general.

Community/membership based websites are generally governed by a Terms of Service/Use agreement that define acceptable community behavior and often proscribe the use of an internal ODR platform to resolve disputes that arise from the use of the website.[92] In many instances, because of the success of the internal dispute resolution platforms, individuals have become more confident and trusting of the use of such technology. Website designers, especially those involved in online sales, knew that trust in the system—including the ability to resolve disputes without needing to file a claim in a brick-and-mortar courtroom, was essential to the success of the platform. The early success of these ODR

[89] Orna Rabinovich-Einy, Technology's Impact: The Quest for a New Paradigm for Accountability in Mediation, 11 HARVARD NEG. L. REV. 258 (2006).
[90] See Rabinovich-Einy & Katsh, supra note 88, at 52.
[91] See id.
[92] Of course, the flip side of the 'agree to use' dispute resolution argument seems much more negative as in most instances such an agreement restricts or completely eliminates your ability to pursue action within a court system. The full nature of this issue is slightly off point to the main issue and is much too large to engage in within this paper. For further information and discussion, see Anjanette H. Raymond, It's Time the Law Begins to Protect Consumers from Significantly One-Sided Arbitration Clauses within Contracts of Adhesion, 91 NEB. L. REV. 666 (2013).

platforms has led to a growth in ecommerce and correspondingly a growth in the use of terms of service that includes ODR, with the potential to use online arbitration,[93] as a means to resolve disputes.

Of course, individuals can and do consent to the use of an online dispute resolution platform outside the community based setting. For example, one of the emerging platforms for ODR, called Modria,[94]has been designed by Colin Rule, one of the creators of the eBay dispute resolution platform. As Professor Rule explains, the Modria ODR platform "implements best practices in a set of modules: dispute diagnosis, negotiation, mediation, and arbitration."[95] Within a business specific ODR platform, the injured party can file their claim online, attach important documentation, and communicate and manage important documentation through a case specific management tool.[96] As the case progresses, individuals are moved from party directed negotiation, into third party supported mediation, and should no resolution occur—formalized arbitration.[97] And similar to eBay,[98] Modria hopes that the vast majority of disputes will be resolved without human intervention, through the use of the above described negotiation and algorithm based systems.

ODR platforms have garnered such a high level of support that governments are moving some of their justice system online. For example, in the United States some counties are handling property assessment appeals[99] and small claims online.[100] While in the European Union cross border business-to-consumer sales disputes will soon be handled online,[101] and Mexico currently uses a platform known as

---

[93] For example, eBay has elaborate policies that apply to buyers and sellers as members of the eBay community, including the use of the eBay Dispute Resolution Center. *See* Resolving Transactions in the Resolution Center, EBAY, http://pages.ebay.com/help/buy/resolving-problems.html (last visited Aug. 5, 2014).

[94] A full description is available on their website. *See* Ass'n for Conflict Resolution, MODRIA, https://acr.modria.com/ (last visited Aug. 5, 2014).

[95] *See* Our Technology, MODRIA, http://www.modria.com/technology/.

[96] *See* id.

[97] *See* id.

[98] *See* id. eBay handles 60 million disputes a year. JAMS, Jams Dispute Resolution Alert -- Summer 2012 (Sept. 6, 2012), http://www.jdsupra.com/legalnews/jams-dispute-resolution-alert-summer-36356/.

[99] For example, U.S. and Canadian Assessors offices—including in Orleans Parrish, LA, Davidson County, TN and British Columbia—are using the Modria platform to resolve property assessment disputes online. *See* MODRIA, supra note 95.

[100] For example, see SWIFT JUDGMENT, http://www.swiftjudgment.com/.

[101] *See* Consumers, Out of Court Redress, EUROPEAN COMMISSION, http://ec.europa.eu/consumers/solving_consumer_disputes/non-judicial_redress/index_en.htm (last visited Aug. 5, 2014) (linking readers to the various country based platforms and providing general information).

Concilianet to resolve business-to-consumer claims arising in both brick-and-mortar and online sale disagreements.[102]

C. Combining Process and Data to Move toward Artificial Intelligence

In many ODR platforms technology is a fourth party in the dispute resolution process; however, the use of artificial intelligence will soon increase the level of technological intervention within the process. As early as 1993 the use of artificial intelligence was being explored as an additional player within the justice system by a doctoral dissertation student named James Popple.[103] Dr. Popple designed, and tested, a pragmatic legal expert system known as SHYSTER. Legal expert systems are systems that make use of artificial intelligence techniques to solve legal problems. These systems can be further divided into two broad categories: legal retrieval systems[104] and legal analysis systems. At this stage in the use of technology, many lawyers are familiar with the use of legal retrieval systems;[105] however, legal analysis systems are different as they can either operate as judgment machines or legal expert systems. SHYSTER was one of the first to fall within the category of legal expert systems. As Australian Freedom of Information Commissioner Dr. James Popple explains: "All systems which merely assist a lawyer in coming to legal conclusions or preparing legal arguments are not here considered to be legal expert systems; a legal expert system must exhibit some legal expertise itself."[106] SHYSTER attempted to

---

[102] See FEDERAL ATTORNEY'S OFFICE OF CONSUMER (PROFECO), http://www.profeco.gob.mx/english.htm (last visited Aug. 5, 2014) (English version). See also Anjanette H. Raymond, Yeah, But Did You See the Gorilla? Creating and Protecting an 'Informed' Consumer In Cross Border Online Dispute Resolution, 19 HARVARD NEG. L. REV. 129 (2014); Anjanette Raymond & Scott Shackelford, Technology, Ethics And Access To Justice: Should An Algorithm Be Deciding Your Case?, 35 MICH. J. INT'L L. 104 (forthcoming 2014); Anjanette Raymond & Scott Shackelford, Building the Virtual Courthouse: Ethical Considerations for Design, Implementation, and Regulation in the World of ODR, 3 WISC. L. REV. 615 (2014).

[103] At the Australian National University and under the supervision of Robin Stanton, Roger Clarke, Peter Drahos, and Malcolm Newey.

[104] The term 'legal retrieval system' has been used multiple ways; however, in general the retrieval system refers to the storage and then subsequent searching of digital information. It is based within the science of information retrieval and seeks to retrieve all information related to a specific query, by using—for example, a boolean search method. For a further discussion, see generally K.T. Maxwell & B. Schafer, Concept and Context in Legal Information Retrieval, Frontiers, in ARTIFICIAL INTELLIGENCE AND APPLICATIONS (IOS Press) 189: 63–72 (2008).

[105] See, e.g., Kevin Curran & Lee Higgins, A Legal Retrieval Information System, JILT 2000 (3); Combrink-Reuters & Piepers: The Use of Information Systems in Research for the Acquisition of Knowledge (1995), 10th BILETA Conference, available at http://www.bileta.ac.uk (last visited Aug. 5, 2014); Sturdy: Wisps of Smoke? The Electronic Library, New Information Retrieval techniques and Diminishing Returns (1994), 9th BILETA Conference, available at http://www.bileta.ac.uk (last visited Aug. 5, 2014); Erich Schweighofer, 'The Revolution in Legal Information Retrieval or: The Empire Strikes Back', 1999 THE J. OF INFO., L. & TECH. (JILT) 1, http://www2.warwick.ac.uk/fac/soc/law/elj/jilt/1999_1/schweighofer/ (last visited Aug. 5, 2014)

[106] James Popple, A Pragmatic Legal Expert System, APPLIED LEGAL PHILOSOPHY SERIES, Dartmouth (Ashgate) (1996).

perform this function[107]—that is to predict the outcome of a specific case. To make this prediction, the SHYSTER system used a model of precedent based justice by using previously decided cases and applicable statutes to predict outcomes.[108]

Although the full parameters of the SHYSTER system are beyond the scope of this paper, one important aspect needs to be highlighted. The SHYSTER system was able to perform a litany of tasks considered essential[109] to case-based reasoning, such as:

> (1) ordering relevant cases and potentially relevant cases in terms of how analogous they are to the problem situation, (2) selecting the most analogous cases, (3) identifying configurations of counterexamples, (4) hypothetically modifying the problem situation to explore contingencies, and (5) comparing case-based analyses of different problem situations to explain differences.[110]

The SHYSTER system has prompted other areas of expert system development. For example, Thomas Alexander O'Callaghan developed a hybrid legal expert system—the SHYSTER-MYCIN—combining two other expert systems: SHYSTER (a legal expert system) and MYCIN (a medical expert system).[111] The system functions by combining rule-based and case-based reasoning. The MYCIN part uses a system of rules to reason with provisions of an Act of a parliament; the SHYSTER part uses analogy to reason with cases that explain "open-textured" concepts encountered in legislation.[112] The SHYSTER-MYCIN system is able to look at the law, find the key terms, elements and areas of uncertainty and then search the case law to further define and narrow those legal grey areas.

Based on the various methods and systems and further advances in artificial intelligence outside the legal community,[113] it is not hard to imagine a very advanced ODR platform that includes the use of artificial intelligence as a means to predict outcomes, influence negotiations, limit bias, reduce unrealistic settlement points, and project future areas of risk for a business. In essence these platforms

---

[107] SHYSTER was tested as a prototype—although not as comprehensibly as the author wanted. Id. at 244.

[108] See Arno R. Lodder & John Zeleznikow, Artificial Intelligence and Online Dispute Resolution 81, in ONLINE DISPUTE RESOLUTION: THEORY AND PRACTICE A TREATISE ON TECHNOLOGY AND DISPUTE RESOLUTION (Mohamed S. Abdel Wahab, Ethan Katsh & Daniel Rainey eds., 2012).

[109] See Kevin Ashley, Modeling Legal Argument: Reasoning with Cases and Hypotheticals, Artificial Intelligence and Legal Reasoning Series, MIT PRESS (Bradford), at 127 (1990).

[110] See Popple, Pragmatic, supra note 106, at 245.

[111] See Thomas Alexander O'Callaghan, A Hybrid Legal Expert System (2003) (thesis, Australian National University), available at http://cs.anu.edu.au/software/shyster/tom/thesis.pdf.

[112] See Thomas A. O' Callaghan, James Popple & Eric McCreath, Building and Testing the SHYSTER-MYCIN Hybrid Legal Expert System, THE AUSTRALIAN NAT'L U., TR-CS-03-01 (2003), available at http://cs.anu.edu.au/software/shyster/tom/tr-cs-03-01.pdf.

[113] See e.g., Lars Hård, Artificial Intelligence In The Enterprise -- What You Need To Know, BetaNews, (August 13, 20014)(discussing the newer uses of artificial intelligence).

will provide one of the most efficient dispute resolution providers to date. In fact, in many ways the building blocks have already occurred; we are now entering a world of private-based ODR systems that will need no human intervention to resolve disputes.

IV. The New Frontier: Business, Disputes and Predictive Analytics

It is important to understand at this stage of the discussion that the use of legal expert systems depends upon well-organized data gathering and management systems combined with the ability to form highly accurate discriminatory factors and steps to use the data gathered in a useful manner. Historically, it was clear that many court decisions were readily available and easily searched; these, in combination with the creation of the case-based reasoning criterion, made predicting a case outcome less of a fantasy and more of a reality. Imagine if the same amount of data could be gathered and used to create a database of profiles and behavior predictions, especially as this information relates to the manner in which individuals behave and respond in the dispute resolution process.[114] Based on the information gathered, imagine that a group of savvy businessmen and lawyers were able to create a system of predictive settlement points, in which an algorithm could with a high level of accuracy predict the appropriate settlement point for particular individuals. How far from reality is the creation of such an algorithm? One has to imagine, not that far from reality at all.

The first step in successfully building a predictive model is to ensure you have a large volume of good-quality, diverse data.[115] As highlighted in the Introduction, retailers for a long period of time have been gathering information on our lives.[116] At this point in our lives, we certainly must be aware of this information gathering. However, retailers, businesses and other web based players are not the only ones capable of gathering information. Information gathering is now ubiquitous—hence the use of the term big data.[117] Thus, one should not be surprised that information has most likely been gathered, for some period of time, on the way that we resolve disputes and the behaviors we demonstrate along the way of resolving the dispute.

---

[114] Keep in mind, as previously discussed; there is already a litany of research on negation behaviors, appropriate responses to such behavior and suggested approaches to overcoming various blocks, limitations, and inappropriate valuations. See supra Section III(A).

[115] See ORACLE, BIG DATA FOR THE ENTERPRISE 3–4 (2013), available at http://www.oracle.com/us/products/database/big-data-for-enterprise-519135.pdf (discussing the big four: volume, velocity, variety and value).

[116] See supra Section III(A).

[117] See ORACLE, supra note 115, at 3–4.

First, the public technology-based dispute resolution systems, from basic communication systems to the more advanced online file management systems,[118] have undoubtedly been gathering data. These systems are in their infancy however, and thus, have limited data sets. However, many private entities have potentially (and likely) been gathering information about the nature, manner and reaction to the dispute process that occurs in the online platforms. Keep in mind, eBay and Amazon lead the way in online dispute resolution.[119] It is certainly easy to imagine they have gathered a large amount of data about the way in which we behave in a dispute. In fact, both entities have released key information related to disputes that certainly suggests they have gathered a lot more than basic information. For example, eBay has long claimed that 80% of the disputes are resolved at one of the early stages of the process, long before human-neutral decisions makers are necessary.[120] To know this information, they had to gather the data.

To put this data to effective use, most platform designers would use an already existing model—or several models—of the manner in which people behave.[121] Models such as this already exist as the current literature is replete with numerous theories of negotiation behaviors,[122] tactics[123] and approaches[124] to be used when in a negotiation process.[125] Studies are also plentiful in the area of

---

[118] See supra note 68.
[119] See supra notes 86-90.
[120] See Orna Rabinovich-Einy & Ethan Katsh, Lessons from Online Dispute Resolution for Dispute System Design, in ONLINE DISPUTE RESOLUTION: THEORY AND PRACTICE 42 (Mohamed S Abdel Wahan, Ethan Katsh & Daniel Rainey eds., Eleven International Publishing 2012).
[121] For example, PredictionIO is an open source machine learning server for software developers to create predictive features, such as personalization, recommendation and content discovery. See PREDICTIONIO, http://prediction.io/ (last visited Aug. 5, 2014).
[122] See, e.g., PETER J. CARNEVALE & ALICE ISEN, THE INFLUENCE OF POSITIVE AFFECT AND VISUAL ACCESS OF INTEGRATIVE SOLUTIONS IN BILATERAL NEGOTIATIONS, ORGANIZATIONAL BEHAVIOR AND HUMAN DECISION PROCESSES, 1–13, 37 (1996); Raymond Friedman, C. Anderson, J. Brett, Mara Olekalns, Nathan Goates & C.C. Lisco, The Positive and Negative Effects of Anger on Dispute Resolution: Evidence for Electronically Mediated Disputes, 89(2) J. OF APPLIED PSYCHOLOGY 369–376 (2004); Andreas Feidakis & Aspasia Tsaoussi, Competitiveness, Gender and Ethics in Legal Negotiations: Some Empirical Evidence, 14(3) INT'L NEGOTIATION: A J. OF THEORY & PRACTICE 537–570 (2009).
[123] See, e.g., Maden M. Pillutla & J.Keith Murnighan, Unfairness, Anger and Spite: Emotional Rejections of Ultimatum Offers, 68(3) Organizational Behavior and Human Decision Processes 208–224 (1996); J. KEITH MURNIGHAN, THE DYNAMICS OF BARGAINING GAMES (Prentice Hall 1991).
[124] See, e.g., Kelly A. Piasentin, Jonas W. Shultz, Chelsea R. Willness, Neil E. Fassina & Krista L. Uggerslev, Recasting Goal Setting in Negotiation: A Regulatory Focus Perspective, IACM 18th Annual Conference, (June 1, 2005) available at http://ssrn.com/abstract=735184.
[125] See generally, Kenneth Glasner, Contract Disputes: The Role of ADR, DISP. RESOL. J. 50 (2000); Jeremy A. Mercer & Evan A. Bloch, Settlement Tactics in US Litigation, PRACTICAL LAW COMPANY (2011), available at http://www.pepperlaw.com/publications_article.aspx?ArticleKey=2262 (discussing settlement options and cost considerations).

mediation and arbitration, where numerous efforts have been undertaken to categorize,[126] analyze[127] and predict appropriate responses to particular statements, behaviors,[128] and engagements.[129] Behavioral responses to conflict have long been documented,[130] researched,[131] commented upon and refined[132]—producing a vast array of information and suggestions all of which can be fed into a model of human negotiation behavior.

Unlike previously designed models, however, the use of technology will allow the model to be tested, in real time, at a much faster pace. Moreover, unlike previous generalized models, the newest technology assisted models will be able to draw upon a large amount of specific and personal information. Imagine logging into an online dispute resolution platform—of course, you would likely do this from a computer you use frequently. At this point, the information is easily obtainable about all of your past searches, preferences, and online behaviors.[133] Moreover, an easy search of a purchased information database also reveals your favorite places to travel, where you buy gas and the local market you frequent.[134]

---

[126] See, e.g., Robin Pinkley, Margaret Neale & Rebecca Bennett, The impact of Alternatives to Settlement in Dyadic Negotiation, 57(1) Organizational Behavior and Human Decision Processes 97–116 (1994); Robert Robinson, Roy James Lewicki & Eileen Donahue, Extending and Testing a Five Factor Model of Ethical and Unethical Bargaining Tactics: Introducing the SINS scale, 21 J. OF ORGANIZATIONAL BEHAVIOR 649–664 (2000).

[127] See, e.g., John Lande, Using Dispute System Design Methods to Promote Good-Faith Participation in Court-Connected Mediation Programs, 50 UCLA L. REV. 69 (2002); Kristina A. Diekmann, Ann E. Tenbrunsel & Adam D. Galinsky, From Self-Prediction to Self-Defeat: The Effect of Expecting a Competitive Opponent on Negotiator Predictions, Behaviors, and Outcomes, AoM Conflict Management Division. No. 12776, (2002 Mtgs.), available at http://ssrn.com/abstract=321447.

[128] See, e.g., Ashleigh Shelby Rosette, Jeanne M. Brett, Zoe I. Barsness & Anne L. Lytle, When Cultures Clash Electronically: The Impact of E-Mail and Culture on Negotiation Behavior (Dec. 12, 2006), available at http://ssrn.com/abstract=959034 (last visited Aug. 6, 2014).

[129] Even the behavior of the neutrals have been studied. See generally Thomas Stipanowich & Zachary P. Ulrich, Commercial Arbitration and Settlement: Empirical Insights into the Roles Arbitrators Play, 6 PENN STATE YEARBOOK ON ARBITRATION AND MEDIATION 1 (2014) (discussing arbitrators role as a mediator and the rise of settlement facilitated by arbitrators).

[130] See, e.g., John F McCarthy, Carl A. Scheraga & Donald E. Gibson, Culture, Cognition and Conflict: How Neuroscience Can Help to Explain Cultural Differences in Negotiation and Conflict Management, IACM 21st Annual Conference Paper (2008), available at http://ssrn.com/abstract=1298588.

[131] See, e.g., Thomas J. Bergmann & Roger J. Volkema, Issues, behavioral responses and consequences in interpersonal conflicts, 15(5) J. OF ORGANIZATIONAL BEHAVIOR 467–471 (1994); Roger J. Volkema & Thomas J. Bergmann, Conflict styles as indicators of behavioral patterns in interpersonal conflicts, THE J. OF SOCIAL PSYCHOLOGY, 135(11) (1995); W.C. King & E.W. Miles, What we know - and don't know - about measuring conflict: an examination of the ROCI-II and OCCI conflict instruments, MANAGEMENT COMMUNICATION QUARTERLY, 4 (2): 222-243(1990).

[132] For a history and review, see generally Nina Pološki Vokić & Sanja Sontor, Conflict Management Styles in Croatian Enterprises – The Relationship between Individual Characteristics and Conflict Handling Styles (University of Zagreb Working Paper Series, Paper No. 09-05, 2009), available at http://web.efzg.hr/RePEc/pdf/Clanak%2009-05.pdf.

[133] See supra Section III(A).

[134] See id.

Additionally, the creation of online open court databases has added to the information that can be obtained about an individual as an easy search can find traffic tickets, bankruptcies, and court filing where online county documents may provide your address, marriage licenses, and other information that used to be obtained only by an in-person record request.[135] This is a lot more information than any negotiator would have in a face-to-face negotiation where you share the information you decide to share- and of course, share those behavioral and emotional responses that you think are well hidden. One can easily imagine these various pieces of data being used within a predicative algorithm, which—with some trial and error—will eventually be remarkably accurate in identifying the individuals key issues/concerns and settlement prospects.[136]

In the negotiations process, you will no longer have to rely upon what I tell you—or what I show you in a given moment—a snapshot in time. The data gathered about me will reveal my true interests, my shopping habits, my Facebook likes, my financial status, my address, my family connections, my church affiliation, my voting habits and preferences, most of my entire life which will be quickly combined with information gleaned from case outcomes specific to my location.

And this is of course the issue, the ODR platform, the interface, the questions asked—down to the word limit set for a text box, the data gathered, the algorithms, the suggestions based on the data, the suggestions of solutions based on prior cases, the entire system in effect, is unregulated, non-transparent and administered by private entities—fallible humans with a business to run. Unfortunately,

---

[135] *See id.*

[136] Of course, there are still some limitations to be addressed. For example, some argue that no machine can (yet) capture the value of a face-to-face interaction, Thomas Holz et al., *Where Robots and Virtual Agents Meet: A Survey of Social Interaction Research Across Milgram's Reality-Virtuality Continuum*, 1 INT'L J. OF SOC. ROBOTICS 83, 85 (2009), *available at* http://srl.informatik.uni-freiburg.de/teachingdir/ws12/6-holzIJSR09.pdf, especially in a negotiation the success of which is often dependent on culture and norms. See Michael W. Morris, Katherine Y. Williams, Kwok Leung, Richard Larrick, M. Teresa Mendoza, Deepti Bhatnagar, Jianfeng Li, Mari Kondo, Jin-lian Luo & Jun-chen Hu, Conflict Management Style: Accounting for Cross-National Differences, 29 J. of Int'l Business Studies 729–747 (1998). For example, Michael Morris, Associate Professor of Organizational Behavior, has examined how negotiations are affected by different communications media. See JEFFREY LOWENSTEIN, MICHAEL MORRIS, AGNISH CHAKRAVARTI, LEIGH THOMPSON & SHIRLI KOPELMAN, AT A LOSS FOR WORDS: DOMINATING THE CONVERSATION AND THE OUTCOME IN NEGOTIATION AS A FUNCTION OF INTRICATE ARGUMENTS AND COMMUNICATION MEDIA IN ORGANIZATIONAL BEHAVIOR AND HUMAN DECISION PROCESSES (Columbia Business School Publication 2005), available at http://www0.gsb.columbia.edu/mygsb/faculty/research/pubfiles/1771/1771B.pdf. Morris argues that it is through the psychology of trust that the type of media can make a difference in the outcome of a negotiation. *See id.* In addition, laboratory experiments conducted with Aimee Drolet, assistant professor at the Anderson School of Business at UCLA, found that higher levels of rapport produced by nonverbal emotional cues give face-to-face negotiations an advantage over telephone negotiations. See Aimee Drolet & Michael W. Morris, Rapport in Conflict Resolution: Accounting for How Nonverbal Exchange Fosters Coordination on Mutually Beneficial Settlements to Mixed Motive Conflicts, 36 (1) J. of Experimental Social Psychology 26–50 (2000).

as much as data gathering, modeling, predictive algorithms and artificial intelligence is likely a positive introduction to the dispute resolution process,[137] there are still many issues to be resolved about the private nature of the platform development and the long term implementation.

V. The Ethical Debate Must Begin

At the current time, the vast majority of U.S.-based ODR platforms are operated and run as a money making business endeavor.[138] That is not to say that the first generation of modern ODR providers are not ethical in their approaches or that they are not focused on providing access to justice to more individuals in the online world. Instead, it is to suggest that the time for debate is now, as the ADR and ODR business is seeing a new impetus for more platforms that are often garnering wide support.

As highlighted by consumer advocates warning that without explicit federal rules or policies overseeing their use, algorithms could potentially be used to identify groups, target aspects of an individual and ultimately discriminate unfairly.[139] For example, in April 2013 the BBC announced a new pricing strategy that most travelers had already suspected—tailored search results and pricing.[140] The airlines insist that the use of tailored results is done to create personalized deals,[141] unsurprisingly a computer glitch at Delta allowed tailored pricing as well.[142] And companies themselves are not alone, search engines and content aggregators, among others, have wide reaching impact upon our results. For example, Orbitz altered its search result default display of their quoting results for users of Apple products, placing the higher prices items first.[143] Their logic—people who could afford these pricy gadgets could afford to pay higher prices. In technology, discrimination is highly important to efficiency and is therefore, everywhere.

---

[137] The use of human face-to-face negotiators/decision makers has drawn much attention in the literature, prompting technology commentators to respond—that's exactly the point, it's time to remove the human bias factor and drill down to the real issue—while respecting culture and norms within the technology and platform design. Of course, both arguments have a point and should be respected, but both also must recognize—machine learning, algorithm design, platform systems and just about everything related to computers still rely upon humans to make key decisions, such as which use-case to pursue or which machine-learning methods to use, which introduces bias into the process. In addition, specific to our case, humans are required to design data gathering tools, adjust based on outcomes, and interpret outcomes—all require accounting for human interference.

[138] Other countries—and in a few instances in the US, some are operated by and supervised under the justice system.

[139] See Singer, supra note 48.

[140] See Suemedha Sood, How Airline Pricing Works, BBC (Apr. 5, 2013), http://www.bbc.com/travel/blog/20130405-how-airline-pricing-works.

[141] See id.

[142] See id.

[143] See Dana Mattioli, On Orbitz, Mac Users Steered to Pricier Hotels, WALL ST. J. (Aug. 23, 2012) http://online.wsj.com/news/articles/SB10001424052702304458604577488822667325882?mg=reno64-wsj&url=http%3A%2F%2Fonline.wsj.com%2Farticle%2FSB10001424052702304458604577488822667325882.html.

Of course, the question really becomes, if discrimination is important, how do we allow some discrimination without allowing too much discrimination? When it concerns justice and private dispute resolution—the debate needs to occur now before a large number of intermediaries and platforms are involved in the process. The main concerns and balances these sections will seek to address cover the issues of the balance needed between running a dispute resolution business and the public's insistence upon assurances of fundamental fairness (A) and the problems that arise with the various businesses being able to craft arbitration clauses and then through the same clause bring the dispute resolution process in house (B).

A. The Private ODR Platforms Have a Business to Run

At the current time the online dispute resolution process is designed, managed and maintained by private entities, at least in the United States.[144] While the business community becomes aware of the growing development of trusted, reliable and efficient ODR platforms, ethical issues will need to be addressed for a private dispute resolution process to remain effective in the resolution of consumer disputes. One of the main issues that must be addressed is the role that a private dispute resolution provider should play in providing the fee-based service of resolving consumer-to-business disputes.

It is not as if outsourcing justice is a new idea, in fact it is something that has been growing in popularity in some areas of the country. For example, many readers may be unaware of the growing industry known as the "Offender-Funded" Probation Industry. In these settings, probationers must pay for the services they receive, even taking on debt to move through required probationary classes, services and programs.[145] While these programs seem to be supported by a growing number of communities facing mounting probation and/or supervision costs, many are beginning to wonder who monitors the monitors.[146] Some argue that the offender payment system provides resources that the community would be otherwise unavailable to provide; however, current research suggests that offender payment systems are creating a new form of debtor-based systems in which offenders that cannot pay linger in

[144] The European Union is in the process of implementing Community legislation that provides for governmental oversight of a cross-border ODR platform. See generally Regulation Of The European Parliament And Of The Council On Online Dispute Resolution For Consumer Disputes (Regulation On Consumer ODR), Brussels, 29.11.2011 COM(2011) 794 final, 2011/0374 (COD) (English) (2011) (outlining the current Regulation, including explanation).

[145] See Andrew Cohen, The Private Probation Problem Is Worse Than Anyone Thought, THE ATLANTIC (Feb. 5, 2014), http://www.theatlantic.com/national/archive/2014/02/the-private-probation-problem-is-worse-than-anyone-thought/283589/.

[146] See HUMAN RIGHTS WATCH, PROFITING FROM PROBATION; AMERICA'S "OFFENDER-FUNDED" PROBATION INDUSTRY (2014), available at http://www.hrw.org/reports/2014/02/05/profiting-probation-0.

the system for significantly longer than those that can pay.[147] When speaking of access to justice issues, one must consider if the lessons learned from outsourcing of the probation industry should be extended into the more general area of justice. For example, the above research suggests that cost of justice must be kept to a reasonable minimum, so those individuals with the least wealth do not continue to remain outside the system or suffer a disadvantage because of an inability to pay.

More importantly, offender-funded probation industry research is suggesting that many providers are focusing more on the best interest of the business[148] and not in the interest of enhancing justice—a real concern in a non-transparent private dispute resolution business model. When private entities seek to provide service in the justice system and/or when they attempt to create entire justice systems, one must also be concerned with an essential element in any justice system—trust. Of course, trust is a double-edged sword in that it exists in multi-dimensions. For example, many within the E.U. argue that an online dispute resolution platform will increase the trust of community members in shopping online, including—and most importantly, in cross border transactions.[149] While this is certainly one aspect of trust building, it is not the essential one for the debate concerning private dispute resolution providers. The online shopping argument is made to support the creation of the ODR platform; however, the debate must now begin to focus on the trust in the platform and the corresponding ODR system. And the debate surrounding trust in these two areas is much larger as it encompasses so many inter-related and privately controlled components. For example, Chairman of the Board and CEO of Cisco Systems John Chambers notes the loss of industry confidence that may occur:

> Our customers trust us to be able to deliver to their doorsteps products that meet the highest standards of integrity and security . . . these actions (of the National Security Agency (NSA)) will undermine confidence in our industry.[150]

And trust and confidence in the digital world is certainly one of the hallmarks in ensuring a continued, robust digitally connected community something that businesses and consumers have a vested interest in safeguarding. Yet, this becomes an even greater issue when coupled with the access to justice issue as it is not merely the ODR platform that will suffer a loss of trust, it may very well be the entire justice system as it relates to the dispute being outsourced to the provider.

---

[147] *See* id.

[148] *See* Cohen, *supra* note 145.

[149] *See* Regulation Of The European Parliament And Of The Council On Online Dispute Resolution For Consumer Disputes (Regulation On Consumer ODR), at 2, COM (2011) 794 final, Brussels, 29.11.2011 2011/0374 (COD) (English) (2011).

[150] BBC Staff Author, Cisco Calls For Curb On NSA Surveillance Efforts, BBC (May 19, 2014), http://www.bbc.com/news/technology-27468794.

B. What is to Stop Business from Bringing the Process In-House

While the temptation may exist to allow the growing enterprise of justice as a business to self—regulate or to allow the industry to grow before considering a regulatory response, both of these approaches lack foresight in the specific issue at hand primarily because many within the business world have sought to disenfranchise consumers from the justice system by the use of alternative dispute resolution mechanisms. The most recent example of General Mills[151] demonstrates a growing trend in the use of hidden ADR clauses. On April 2, 2014 General Mills updated its privacy policy[152] and placed a notice of the changes on its website.[153] The notice states:

> We've updated our Privacy Policy. Please note we also have new Legal Terms which require all disputes related to the purchase or use of any General Mills product or service to be resolved through binding arbitration.[154]

In essence, consumers who follow General Mills brands on social networks, subscribe to newsletters, enter sweepstakes, print coupons or benefit in any way using the site also enter into a contract with the company, waiving all rights to future lawsuits. As can be seen in the language, General Mills supports such a wide clause on the basis of the consumers receiving a benefit from such activity. Unsurprisingly, consumer advocates noticed and on or about April 16, 2014 the New York Times reached out to General Mills for explanation.[155] In what can only be called a potential ethical and legal disaster, General Mills has little explanation and the spokesperson hinted that consumers who buy the products could also be bound by those terms.[156] Frankly, this is one of the main reasons why consumer advocates (and consumers themselves) dislike arbitration—the manner in which the agreement to arbitrate is hidden by businesses.[157] Notice however, two key things within the overall policy of General Mills (1) the policy clearly allows General Mills to collect and share, widely, a lot of personal and specific to the individual information, and (2) the policy can be changed at any time.[158]

---

[151] See Michelle Coffey, If You 'Like' General Mills On Facebook, You Surrender Legal Rights, MARKET WATCH, (Apr. 2014), http://blogs.marketwatch.com/behindthestorefront/2014/04/17/if-you-like-general-mills-on-facebook-you-surrender-legal-rights/?mod=MW_home_latest_news&link=sfmw.

[152] See Privacy Policy, GENERAL MILLS, http://generalmills.com/Privacy_Policy.aspx (last visited Apr. 19, 2014).

[153] See GENERAL MILLS, http://generalmills.com/ (last visited Apr. 19, 2014).

[154] Id.

[155] See Stephanie Strom, When 'Liking' a Brand Online Voids the Right to Sue, N.Y. TIMES, (Apr. 2014), http://www.nytimes.com/2014/04/17/business/when-liking-a-brand-online-voids-the-right-to-sue.html?_r=0.

[156] See id.

[157] The responses to the attempts to use dispute resolution in this manner have been addressed by some of the largest arbitration institutions. For a further discussion see infra Section VI(B)(1).

[158] See GENERAL MILLS, supra note 153.

General Mills, maker of just about everything we eat,[159] knows or intends to know a lot of information about each of us, intends to share it with everyone that will pay them for the information, and intends to have all disputes handled within a confidential proceedings run by a private business entity.[160] At this point, General Mills serves as the perfect example for the ethical debate surrounding a commercial business's ability to create its own ODR platform, especially one that will visually appear to be run by an unconnected third party.

Within platform design, implementation, running and upkeep there are numerous ethical issues that arise. For example, the White House Big Data Report[161] asks and responds to a very important current debate topic within the legal academic world: "how these technologies affect the way we live and the way we work — and how big data is being used by universities, the private sector, and the government."[162] And while many of these issues are beyond the scope of the paper—one complex issue is directly related to the privatization of justice: the manner in which we allow businesses to use individual and aggregated data in a contractually created private dispute resolution system.

As previously explained, businesses have a lot of specific and aggregated information a large portion of which can be linked to a particular individual and much of which can be used to make predictions about future events and behaviors of that individual.[163] And while this information may lead to better advertising within the online world, it may also be used to the disadvantage of an individual. For example, if Target can accurately predict the birth of your child and thereby direct advertising across multiple platforms that is specific to you—it is not a large logical leap to imagine that the business would also be able to design, influence and predict your response to a highly personalized dispute 'settlement' offer. Of course, there is nothing to suggest that the settlement offer will reflect what the individual is legally entitled to in light of the circumstances as the recommendations are done without advice of counsel and are completed within a system designed by a business, seeking future clients for its dispute

[159] For a full list of the brands and products of General Mills, see GENERAL MILLS, http://www.generalmills.com/brands.aspx.
[160] See GENERAL MILLS, *supra* note 152.
[161] See WHITE HOUSE, *supra* note 6, at 3.
[162] *Big Data Review Summary and Release*, THE WHITE HOUSE, http://www.whitehouse.gov/issues/technology/big-data-review (last visited Aug. 11, 2014).
[163] See *supra* Section III(A).

resolution business, with no regulation or oversight and widely supported as an alternative justice system by the U.S. Supreme Court.[164]

Furthermore, in this instance General Mills, and any business providing ODR services, will gather a larger amount of information about its disputes and ultimate resolutions and will then likely use that information to further develop a better predictive algorithm. Big data already exists[165] and most individuals have already given away their ability to control the gathering and use of this information, with notable exceptions.[166]

The question then becomes, what is keeping businesses from bringing the dispute resolution process in-house. One assumes dispute resolution—even ODR—is designed like the justice system, with neutral third parties assisting the injured party in making decisions, helping parties move toward settlement and ultimately deciding the dispute. But who is to say this is the case and will always be the case. Imagine a business creating a dispute resolution sub-division, different name, different managers that are tasked with resolving the disputes of the business. In fact, this situation is not hard to imagine—although the example is a little less obvious. In the early stages of the ODR revolution, "a leading global provider of Web-enabled and in-person dispute-resolution services," NAM Corp., "announced . . . that Insurance Services Office, Inc. (ISO) . . . acquired 16 percent of" its outstanding equity.[167] "As part of the transaction, ISO [was] issued 642,570 shares of common stock"[168] and the President and Chief Operating Officer of ISO joined NAM's Board of Directors.[169] In practical terms, one of the major clients of an ODR provider now owned a portion of—and benefited from the use of—its dispute resolution provider. While this type of scenario is infrequent, it is not hard to imagine the benefits that could occur if a business was to take advantage of such a situation. It is important to recognize, the ODR industry is

[164] The U.S. Supreme Court case law reflects a "liberal federal policy favoring arbitration," Moses H. Cone Memorial Hospital v. Mercury Constr. Corp., 460 U.S. 1, 24, enunciating the "fundamental principle that arbitration is a matter of contract," Rent-A-Center, West, Inc. v. Jackson, 561 U.S. 63 (2010). Arbitration agreements are to be interpreted and reviewed on an equal footing with other contracts, Buckeye Check Cashing, Inc. v. Cardegna, 546 U.S. 440, 443, and enforced according to their terms, Volt In-formation Sciences, Inc. v. Board of Trustees of Leland Stanford Junior Univ., 489 U.S. 468, 478.

[165] *See supra* notes 9-15 and corresponding discussion.

[166] For example, as it relates to medical information. *See* U.S. Dep't of Health & Human Servs., Health Information Privacy, The Health Insurance Portability and Accountability Act of 1996 (HIPAA) Privacy, Security and Breach Notification Rules, explanation and summary available at http://www.hhs.gov/ocr/privacy/index.html (last visited Aug. 16, 2014).

[167] Press Release, Insurance Servs. Office, Inc., Nam Corporation, Parent Company of Clicknsettle.com, Announces That Insurance Services Office, Inc., Acquires 16 Percent Stake in Nam, (May 11, 2000), http://www.iso.com/Press-Releases/2000/NAM-CORPORATION-PARENT-COMPANY-OF-CLICKNSETTLE.COM-ANNOUNCES-THATINSURANCE-SERVICES-OFFICE-INC.html.

[168] *Id.*

[169] *Id.*