Data Analytics and the Erosion of the Work/Non-Work Divide

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INTRODUCTION

> The application of predictive analytics to people's careers. . . is enormously challenging, not to mention ethically fraught. And it can't help but feel a little creepy. It requires the creation of a vastly larger box score of human performance than one would ever encounter in the sports pages, or that has ever been dreamed up before. To some degree, the endeavor touches on the deepest of human mysteries: how we grow, whether we flourish, what we become. Most companies are just beginning to explore the possibilities. But make no mistake: during the next five to 10 years, new models will be created, and new experiments run, on a very large scale.[1]

Imagine a workplace in which the employer had access to millions of bits of data about its employees—their off-duty hobbies, consumer preferences, and political views; the fact that they are contemplating becoming pregnant or concerned about developing diabetes; their heart rates, amounts of physical activity, and sleep patterns; even their state of mind when arriving to and leaving from work. What if that employer could use all of that information to make decisions about the design of the workplace, create teams and identify potential leaders, determine insurance rates for workers, and offer professional development opportunities? This, unbeknownst to many of us, is the modern-day workplace. Because of our reliance on the internet, our addiction to social media, and our general disregard for privacy concerns, most of us have left enormous data trails that employers are now beginning to access in order to create the most efficient workplaces possible.[2] In so doing, however, they have extended their reach beyond the information that was previously available—information gleaned from workers at work—and have begun to collect and use data on employees' personal lives. While this data may be useful to employers, collection of and reliance on such information also constitutes a new overreach that will likely lead to a substantial erosion of the work/non-work divide and is ultimately problematic for employers and employees alike.

Big data offers numerous benefits to society. The ability to aggregate and analyze massive quantities of data makes it possible to track previously unseen trends in human health,[3] provides new information about the legal system and the tendencies of courts,[4] offers more accurate predictions of weather patterns, [5] and allows for innovative responses to humanitarian crises,[6] among other uses. But the most obvious and prevalent uses of big data continue to arise

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[1] Don Peck, *They're Watching You at Work*, THE ATLANTIC, Dec. 2013, https://www.theatlantic.com/magazine/archive/2013/12/theyre-watching-you-at-work/354681/.

[2] *The Enormous Data Trail We Generate Throughout the Day*, BBVA (Aug. 24, 2016), https://www.bbva.com/en/the-enormous-data-trail-we-generate-throughout-the-day/; Manoush Zomorodi, *Do You Know How Much Private Information You Give Away Every Day?*, TIME, March 29, 2017, http://time.com/4673602/terms-service-privacy-security/.

[3] *See, e.g.*, Wullianallur Raghupathi and Viju Raghupathi, *Big Data Analytics in Healthcare: Promise and Potential*, 2:3 HEALTH INFO. SCI. SYS. 2014, https://link.springer.com/content/pdf/10.1186%2F2047-2501-2-3.pdf.

[4] *See, e.g.*, Stanford Law School Securities Class Action Clearinghouse, https://law.stanford.edu/securities-class-action-clearinghouse-scac/.

[5] Seeta Peña Gangadharan, *How can big data be used for social good?*, THE GUARDIAN (May 30, 2013), https://www.theguardian.com/sustainable-business/how-can-big-data-social-good.

[6] *Id.*

in the business world in which the ability to analyze extremely large data sets allows companies to track and respond to customer preferences and to identify, rank, and rate consumers and workers alike.[7] These uses can be both beneficial to society and extremely troubling because of privacy concerns, the fear that inaccurate information will be trapped in the system, and the potential for unseen bias to infect the data.[8]

The use of big data by employers is of particular concern from both ethical and legal perspectives. Remarkably, there is a dearth of legal regulation specifically governing this data gathering and use. In the last several years, scholars have begun to focus on the ethical implications of data analytics at work, the lack of transparency in their use, the privacy issues created by these technological advances, and the ways in which existing discrimination law is and is not implicated.[9] This project breaks new ground in the field by examining the impact of data analytics on the divide between work and non-work spheres and considers the long-term negative impacts this blurring is likely to have on employers as well as employees.

This Article looks specifically at statutory and doctrinal conceptions of work and non-work time in the United States and the potential for data analytics to blur the line between the two in more ways than ever before. The Fair Labor Standards Act along with several other legislative initiatives and common law doctrines generally conceive of a dividing line between work time and non-work time and delineate the activities that must be compensated as work. This division protects employers and employees alike. Nonetheless, the explosion of technological advances that allow employers to monitor and rely upon worker's off-duty conduct will likely weaken the dividing line between work and non-work in dramatically greater and more troubling ways than ever before.

Examples of this overreach abound. Employers have begun to rely on algorithms that harvest massive quantities of data from employees' social media and other online profiles and use this data to screen for the most productive teams and the best workers.[10] Employers can now use data analytics to track their employees' family planning thoughts and healthcare concerns.[11] Finally, facial recognition technology and sentiment analysis is available to evaluate employees' emotional states.[12] The emergence of these programs allowing employers to track, rely upon, and possibly control non-work activities, views, preferences, and emotions represents a major blurring of the line between work and non-work. The notion that thousands of bits of data involving an employee's off-duty activities, beliefs, and predilections can impact an employer's at-work decisions suggests a need to re-examine the notion of work vs. non-work time and to question whether existing protections adequately consider a world in which these lines have been so significantly muddled. As a society, we need to acknowledge the implications of the availability of massive quantities of employees' off-duty data and to decide whether and how to regulate its use by employers.

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[7] *See* Frank Pasquale, *Digital Star Chamber*, AEON MAGAZINE (Aug. 18, 2015), https://aeon.co/essays/judge-jury-and-executioner-the-unaccountable-algorithm.
[8] *Id.*
[9] *See, e.g.*, Matthew T. Bodie, et. al., *The Law and Policy of People Analytics*, 88 U. COLO. L. REV. 961 (2017); Pauline T. Kim, *Data-Driven Discrimination at Work*, 58 WM. & MARY L. REV. 857 (2017); Kate Crawford & Jason Schultz, *Big Data and Due Process: Toward a Framework to Redress Predictive Privacy Harms*, 55 B.C. L. Rev. 93, 94 (2014); Solon Barocas & Andrew D. Selbst, *Big Data's Disparate Impact*, 104 CALIF. L. REV. 671, 674 (2016).
[10] *See infra* Part II.
[11] *Id.*
[12] *Id.*

I. THE WORK/NON-WORK DIVIDE

Before the Industrial Revolution, personal life and work were merged in the home environment. "Work was done in the home by the family, which was also the primary site of intimacy."[13] Since the Industrial Revolution, however, Americans have typically conceived of two separate spheres: family and personal life in the home and work in the market.[14] "The law followed, with separate law governing the family and the market."[15] Although there is no single statute that creates a division between work life and personal life, and although, as will be discussed *infra*, the line between the two has begun to fray, there are several statutes and common law doctrines that together give rise to the notion of a work/non-work divide. This notion is both cultural and legal in nature. As millennials enter the workforce in greater numbers, bringing with them their values and views of work, the cultural division between work and personal time will likely erode further. Nonetheless, this Article contends that there are benefits, including financial, physical, and legal benefits, to both employers and employees of maintaining some division between work and non-work time. And, the increasing use of data analytics to mine employees' off duty activities, emotions, ideas, and preferences for use in the workplace has the capacity to destroy the division altogether.

A. Legal Conceptions of a Work/Non-Work Divide

While the creation of separate spheres for work and personal life was not the ultimate goal of the Fair Labor Standards Act ("FLSA"), its provisions serve to define the two spheres to some extent. The FLSA was passed in 1938 as part of the New Deal and "was enacted during a time when workers desired more leisure time away from their jobs but also wanted protection from job insecurity and unemployment."[16] The FLSA was born out of a social movement in which workers attempted to attain more control over their working and non-working hours. As Deborah Malamud has described:

> For well over a hundred years before the New Deal, a social movement aimed to reduce the average weekly working hours of the American worker. The movement

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[13] Naomi Schoenbaum, *The Law of Intimate Work*, 90 WASH. L. REV. 1167, 1174 (2015) (citing Frances E. Olsen, *The Family and the Market: A Study of Ideology and Legal Reform*, 96 HARV. L. REV. 1497, 1499 (1983) (exposing and critiquing legal separation of family and market)).

[14] *Id. Cf.* Catherine Albiston, *Institutional Inequality*, 2009 WIS. L. REV. 1093, 1116 (2009) ("In contrast to approaches that claim that industrialization caused work to leave the home, alternative interpretations describe how industrialization redefined the meaning of work as a social category. In particular, accounts that focus on gender examine how women's labor, which was previously considered productive work, became defined through economic and legal changes as the antithesis of work.")

[15] *Id.* (citing Ruth Gavison, *Feminism and the Public/Private Distinction*, 45 STAN. L. REV. 1, 10-43 (1992)). Schoenbaum lays out the law and ideology of post-industrial Revolution separate spheres in order to critique this distinction as being a false one from the perspective of those engaged in intimate work, which she defines as involving body work (e.g. doctors, massage therapists), care work (e.g. home health work, childcare work), confidence work (e.g. divorce lawyer, therapist), erotic work (e.g. sex workers, erotic dancers). But the notion that the law continues to conceive of separate spheres for personal life and work life holds true and has value for workers and employers alike.

[16] Charlotte Alexander et. al., *Stabilizing Low-Wage Wor*k, 50 HARV. C.R.-C.L. L. REV. 1, 14 (2015) (quoting Nantiya Ruan, *Same Work, Different Day: A Survey of the Last Thirty Years of Wage Litigation and its Impact on Low-Wage Workers*, 30 HOFSTRA LAB. & EMP. L.J. 355 (2013)).

> had four major goals: improving the health of the working classes by lessening the intensity of their exposure to workplace hazards; diminishing unemployment by spreading the available work among all those customarily employed in a particular field; increasing the leisure time of the working classes to facilitate their education and full participation as citizens; and establishing working hours as a sphere of worker control over the process of industrial production.[17]

This movement for an eight-hour day "was predicated on the grand vision of safeguarding workers' non-work time from the demands of employers to ensure that workers would have sufficient leisure time to dedicate to self-development and political participation as citizens."[18] Despite these auspicious goals, the FLSA as enacted was "a comparatively modest piece of legislation with hours provisions intended mainly as a work-spreading measure to alleviate unemployment."[19]

Nonetheless, the FLSA regulates several aspects of working hours and delineates the activities and blocks of time that must be compensated as work thereby codifying into law the notion of a dividing line between work time and non-work time. The FLSA regulates two major aspects of working hours: (1) it establishes the forty-hour work week, and (2) it requires overtime pay of one and one-half times the regular rate for any hour worked in excess of forty hours a week.[20] In addition, in interpreting the FLSA, courts focus on "compensable" work, distinguishing it from non-compensable time off or activities that are not sufficiently integral to the employee's work to be considered working time.[21] For example, lunch breaks are generally conceived of as non-work time and need not be paid whereas "on call" time when an employee is waiting on the employer's premises may or may not be considered working time that must be compensated depending on the agreement between the parties and the nature of the position.[22] Travel time between job sites may be considered compensable work whereas regular commuting from home to work is not typically work time.[23] While courts sometimes struggle with where to

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[17] Deborah C. Malamud, *Engineering the Middle Classes: Class Line-Drawing in New Deal Hours Legislation*, 96 MICH. L. REV. 2212, 2223 (1998).

[18] Shirley Lung, *Overwork and Overtime*, 39 Ind. L. Rev. 51, 57 (2005).

[19] *Id*. *See also* Robert C. Bird, *Why Don't More Employers Adopt Flexible Working Time?*, 118 W. VA. L. REV. 327, 330-333 (2015) (describing the evolution of the concept of "working time").

[20] *Id*. at 58 (citing 29 U.S.C. § 207(a)(1) (2000)). *See also* Alexander, *supra* note 16 at 14 (the FLSA also "mandates a minimum hourly wage, . . . prohibits child labor, and requires employers to keep accurate time records") (citing 29 U.S.C. §§ 206, 212, 211(c)).

[21] Sandel v. Fairfield Indus., No. 4:13-CV-1596, 2015 U.S. Dist. LEXIS 161555, at *5-6 (S.D. Tex. June 25, 2015) ("Notably, only hours that are spent on tasks that the employee is "employed to perform" are compensable. Compensable activities are those activities that are "integral and indispensable" to an employee's "principal activity or activities." (citing Integrity Staffing Solutions, Inc. v. Busk, 135 S.Ct. 513, 519 (2014)).

[22] *See, e.g.*, Mendez v. U.S. Nonwovens Corp., 314 F.R.D. 30, 49 (E.D.N.Y. 2016) ("employees are not entitled to compensation during break periods when they are not working"); Owens v. Local No. 169, Ass'n of W. Pulp & Paper Worker, 971 F.2d 347, 350 (9th Cir. 1992) (holding that on-call waiting time was not compensable work because of the express, constructive and collective bargaining agreements between the parties).

[23] *See* Kuebel v. Black & Decker Inc., 643 F.3d 352, 361, 361 n.4 (2d Cir. 2011) (noting that ordinary home to work travel is outside the coverage of the FLSA but that travel time between stores during the workday may be fully compensable under the FLSA); Beecher v. TWC Admin. LLC, No. 15-CV-00154-WMS-JJM, 2016 U.S. Dist. LEXIS 112617, at *17 (W.D.N.Y. Aug. 22, 2016) ("In an opinion letter dated March 10, 2009 (RO 09-0023) [67-11], the [N.Y State] DOL responded to an inquiry as to whether travel time from one job site to another job site was compensable. The DOL distinguished the travel between work sites from travel commuting to and from work 'at the

draw the line for particular activities, there is an acknowledgment in the law that a line exists for the protection of workers and employers.

In addition to the FLSA, the National Labor Relations Act ("NLRA"), enacted in 1935, also distinguishes between work and non-work times and spaces.[24] Like the FLSA, the NLRA's primary purpose is not the creation of this work/non-work divide yet several of its provisions have that effect.[25] The statute relies upon the concept of a division of the spheres in order to delineate when employers can prohibit labor organizing activities and when they must be permitted.[26] Section 7 of the NLRA guarantees private-sector employees "the right to self-organization, to form, join, or assist labor organizations, to bargain collectively through representatives of their own choosing, and to engage in other concerted activities for the purpose of collective bargaining or other mutual aid or protection."[27] In an attempt to balance this right with employers' need to create and maintain productive workplaces, the National Labor Relations Board (NLRB) "has developed a series of presumptions regarding employer rules that seek to restrict protected activity by employees on employer property."[28] Among these rules is one that dictates when employees may engage in "in oral solicitation on company property."[29] In *Republic Aviation v. NLRB*,[30] the Supreme Court "recognized that employers may lawfully

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beginning and end of the workday' which it deemed to be non-compensable because the employee was free to engage in personal pursuits and activities.");

[24] 29 U.S.C. §§ 151-169 (2018).

[25] *See* Eli Naduris-Weissman, *The Worker Center Movement and Traditional Labor Law: A Contextual Analysis*, 30 BERKELEY J. EMP. & LAB. L. 232, 307 (2009) ("The goal of the NLRA was to establish a well-defined system of industrial relations through which employee organizations and employers could manage conflict."); Andrew A. Lipsky, *Participatory Management Schemes, The Law, And Workers' Rights: A Proposed Framework Of Analysis*, 39 AM. U.L. REV. 667, 667 (1990) ("Members of Congress stated that the NLRA's purpose was to reduce conflict between labor and management through the promotion of collective bargaining." (citing S. 1958, 73d Cong., 1st Sess., 79 CONG. REC. 7565 (1935), reprinted in 2 NLRB, LEGISLATIVE HISTORY OF THE NATIONAL LABOR RELATIONS ACT, 1935, at 2341 (1985) (statement of Sen. Wagner) (stating that "bill is designed to promote industrial peace. The bitterness and the heavy cost of economic conflicts between employers and workers in this country constitute a long and tragic story"))).

[26] *See* Jeffrey S. Bosley & Taylor Ball, *Law at the Speed of Dial Up: The Need for a Clear Standard for Employee Use of Employer-Provided Email Systems that Will Withstand Changing Technology*, 13 WASH. J.L. TECH. & ARTS 49, 52 (2017) (describing NLRB rules regarding when employers must permit organizing in connection with working and non-working time and employer property).

[27] 29 U.S.C. § 157 (2018).

[28] Bosley & Ball, *supra* note 26, at 52.

[29] *Id*. *See also* Benjamin Sachs, *The Unbundled Union: Politics Without Collective Bargaining*, 123 YALE L.J. 148, 172 (2013) ("[T]he National Labor Relations Act (NLRA) allows employees to use the workplace as a centralized location for organizing by granting employees the right to speak with one another about unionization in non-work areas of the workplace and during non-work time." (citing *Republic Aviation Corp. v. NLRB*, 324 U.S. 793 (1945).

[30] Republic Aviation Corp. v. NLRB, 324 U.S. 793 (1945). As Michael Oswalt has described, in 1945 when *Republic Aviation* was decided, the notion of break times or non-work periods during the day was firmly established in U.S. businesses. Michael Oswalt, *The Right to Improvise in Low-Wage Work*, 38 CARDOZO L. REV. 959 (2017) (note: no page numbers listed on Lexis).

> In the previous decades industrialists had been buffeted by a range of management theories that eventually convinced most that the "prisonlike" employment conditions of the late 1800s were, if nothing else, bad for productivity. By the 1930s scientific management, fatigue science, and the human relations school had all come to counsel that short breaks made for more and better products in less time. A leading business text from 1934 surveyed the current research to conclude that "no sane management would think of forbidding its employees to take an occasional "breather.'" By the forties that view had achieved something of a consensus among major employers, the U.S. Department of Labor, and standard management handbooks. This, combined

limit solicitation during working time because of potential interference with productivity. . . . Restrictions on solicitation activity during non-working time are unlawful, regardless of whether the solicitation occurs in a working area or break facilities."[31] The Board had earlier made this notion of a separation between work and non-work time even clearer in *Peyton Packing Co.* in 1943.[32] The Board held, "The Act, of course, does not prevent an employer from making and enforcing reasonable rules covering the conduct of employees on company time. *Working time is for work. . . . It is no less true that time outside working hours, whether before or after work, or during luncheon or rest periods, is an employee's time to use as he wishes without unreasonable restraint.*"[33] More recent NLRB rulings have gone so far as to set aside the results of an election because the employer was found to have engaged in objectionable surveillance of an employee distributing organizing materials during non-work time.[34] The NLRA, with the goal of protecting workers' ability to organize and bargain collectively, necessarily distinguishes between work and non-work time and protects not only employees' abilities to organize during non-work time but also their right to be free from surveillance of protected organizing activities during non-work hours.[35]

This concept of a divide between work and non-work is also evident in state workers' compensation systems, which rely on the "course of employment" notion as a limiting category for employer liability. Like the federal statutory provisions discussed, workers' compensation

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> with the rise of unionization - abolishing infamous exhaustion symbols like the "Ford stomach" - and the National War Labor Board, with its power to mandate paid rest "when the shifts were excessively long," popularized and formalized breaks to such an extent that a 1954 survey found that nearly seventy percent of all large employers (union and non-union shops included) provided employees with breaks even beyond lunch. Thus, when the Board set out the Republic Aviation rules in 1943, and when the Supreme Court sanctioned them in 1945, each institution could reasonably assume that most employees had some measure of non-working free time to balance out employer control of worktime.

Id. Oswalt also recognizes, however, that although the notion of breaks during the workday was the norm in 1945, the situation is far different today. *Id.* ("The lunching landscape in white collar settings is perhaps best summed up by a recent headline in the satirical newspaper, The Onion: Coworkers Pull Off Daring One-Hour Lunch Break. Overall, eighty percent of office workers report eating lunch at their desks, usually in less than thirty minutes and in the midst of other computer-related tasks. As for the low-wage service industry, forget about it. In 2011, Walmart lost a $ 187 million verdict over skipped breaks in Pennsylvania, and in 2008, it paid $ 640 million to settle over sixty similar suits nationwide. Ethnographies, interviews, and reports paint a consistent picture of breaks skipped entirely or whittled down to frenetic pit-stops.").

[31] Bosley & Ball, *supra* note 26, at 52.

[32] In the Matter of Peyton Packing Company, Inc. and Amalgamated Meat Cutters And Butcher Workmen of N. A., A. F. of L., Local # 606, 49 N.L.R.B. 828 (N.L.R.B May 18, 1943).

[33] *Id.* at 843 (emphasis added).

[34] *See* PartyLite Worldwide, Inc. and Teamsters Excavating, Grading, Asphalt, Private Scavengers, Automobile Salesroom, Garage Attendants and Linen and Laundry Drivers, Local Union No. 731, International Brotherhood of Teamsters, 344 N.L.R.B. 1342, 1343 (N.L.R.B. July 29, 2005).

[35] *See* Charles B. Craver, *Privacy Issues Affecting Employers, Employees, and Labor Organizations,* 66 LA. L. REV. 1057, 1068 (2006) ("Company managers have the right to watch regular employees to be sure they are performing their assigned job tasks and are not engaging in impermissible conduct during their work time. On the other hand, if managers engage in surveillance of protected concerted activities during the non-work time of employees, their employers will be subject to unfair labor practice liability. Firms will similarly be found in violation of the NLRA if they induce or encourage rank-and-file employees to spy upon the protected activities of their coworkers.").

systems do not have as their goal the creation of this divide.[36] Nonetheless, it is a necessary concept to achieve the programs' aims.

"Workers' compensation is in essence a statutorily-mandated agreement between the employer and employee to compromise in the event the employee suffers injury or disease in the course of employment."[37] The compromise provides that the workers' compensation system is the exclusive remedy for an employee's at-work injury thereby assuring that "the sacrifices and gains of employees and employers are to some extent put in balance, for, while the employer assumes a new liability without fault, he is relieved of the prospect of large damage verdicts."[38] Although each state maintains its own worker's compensation statutory scheme, the laws of every state include reference to the "course of employment" concept in delineating when employers are liable for the injuries of their employees.[39]

As may be expected, the "course of employment" phrase is often the subject of significant debate in litigation and numerous decisions turn on its interpretation.[40] Nonetheless, when courts refer to the "in the course of employment" requirement, they are generally interested in "the time, place, and manner of the accident."[41] Put another way, "[i]t relates to the connection between the work and the injury in reference to the time, place and activity; that is, it demands that the injury be shown to have arisen within the time and space boundaries of the employment, and in the course of an activity which has a purpose related to the employment."[42] In essence, "[w]hen determining whether an injury occurred during the course of employment,

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[36] Emily A. Spieler, *Perpetuating Risk? Workers' Compensation And The Persistence Of Occupational Injuries*, 31 HOUS. L. REV. 119, 129 (1994) ("The primary purpose of workers' compensation is distribution of social insurance benefits.").

[37] Benjamin R. Hutchinson, *It Has to End Somewhere: Feiereisen v. Newpage Corp. and the Scope of the Employment Contract*, 64 ME. L. REV. 325, 327-328 (2011) (citing Me. Rev. Stat. tit. 39-A, § 201(1) (2010) ("[i]f an employee . . . receives a personal injury arising out of and in the course of employment or is disabled by occupational disease, the employee must be paid compensation and furnished medical and other services by the employer who has assented to become subject to this Act.") (noting that "The 'arising out of and in the course of employment' language is a relic from the original Workers' Compensation Act in Maine (citing Helen B. Mailman's Case, 118 Me. 172, 180, 106 A. 606, 610 (1919))).

[38] *Id*. at 328.

[39] Bob Burke, *The Evolution of Workers' Compensation Law in Oklahoma: Is the Grand Bargain Still Alive?*, 41 OKLA. CITY U.L. REV. 337, 363 (2016) ("The phrase "arising out of and in the course of employment" appears in the workers' compensation laws of every state." (citing Harold J. Fisher, *Injuries Arising Out of and in the Course of Employment*, 26 MO. L. REV. 278, 279 (1961))). *See also* Hutchinson, *supra* note 37, at 331 n.49 (citing Ala. Code § 25-5-1(9) (2011); Alaska Stat. § 23.30.395(2) (2011); Ariz. Const. art. XVIII, § 8; Arkansas Code Ann. § 11-9-102(4)(A) (West 2011); Colo. Rev. Stat. Ann. § 8-40-201(14) (West 2011); Del. Code Ann. tit. 19, § 2301(4) (West 2011); Fla. Stat. Ann. § 440.01 (2011); Ga. Code Ann. § 34-9-1 (West 2011); Kan. Stat. Ann. § 44-501(a) (West 2010)). *See also id.* at 328 ("In determining the scope of activities considered to be within the employment contract, the words 'arising out of and in the course of employment' are construed as having central importance.") (citing *Standring v. Town of Skowhegan*, 2005 ME 51, P 11, 870 A.2d 128*; Cox v. Coastal Prods. Co.*, 2001 ME 100, P 8, 774 A.2d 347; *Husvar v. Engineered Prods*., Inc., 2000 ME 132, P 5, 755 A.2d 498; *Moore v. Pratt & Whitney Aircraft*, 669 A.2d 156, 158-59 (Me. 1995); *Morse v. Laverdiere's Super Drug Store*, 645 A.2d 613, 614 (Me. 1994); *Somes v. Flint Logging*, 635 A.2d 941, 942 (Me. 1993); *Comeau v. Me. Coastal Servs.*, 449 A.2d 362, 365-67 (Me. 1982); *Nadeau v. S. Berwick*, 412 A.2d 392, 393-94 (Me. 1980); *Metcalf v. Marine Colloids, Inc.*, 285 A.2d 367, 369 (Me. 1972)).

[40] *See* Hutchinson, *supra* note 37, at 331. *See also* Breanna Hance, *"Equal Exposure" Brews Frustration for Employees: Court Filters Personal Comfort Doctrine Through Workers' Compensation Amendments*, 78 MO. L. REV. 573, 582 (2013) ("Although the [Missouri] legislature has attempted to define this requirement, there is no precise formula for determining whether an injury arises out of and in the course of employment.").

[41] Hance, *supra* note 40, at 582.

[42] Burke, *supra* note 39, at 364-365 (quoting Fisher, *supra* note 39, at 283).

courts are making inquiry as to the work-connectedness of the injury to confirm that the injury resulted from a hazard or risk that is inherent in the employment, and therefore, one that the legislature had designed the workers' compensation system to cover."[43] Regardless of where a particular court draws this boundary between compensable injury and non-work related and thus non-compensable injury, one of the key concepts on which all workers' compensation laws are based is the notion of a distinction between work and non-work spheres. It is a given that there is such a distinction, and it is the role of the court in these cases to determine where, in a particular case, that line sits.

Finally, from the perspective of agency law and questions of employer liability, the notion of work versus non-work spheres arises in determinations of employer liability for employees' tortious conduct under the common law doctrine of *respondeat superior*.

> The concept of employment is used as the basic dividing line in the doctrine of respondeat superior. . . . Respondeat superior has its roots in early master-servant doctrine, in which a master was liable for harms caused by the actions of his servant. The doctrine continues in the modern common law, with most courts using the term "employee" in place of "servant." Although many different justifications for the doctrine have been given, most center around the responsibility for or control of the employer over the employee.[44]

In general, employers are responsible for the torts of their employees when committed within the "scope of employment." This concept, integral to the division between work and non-work time is defined by the Restatement (Second) of Agency § 228 as follows:

> (1) Conduct of a servant is within the scope of employment if, but only if:
> (a) it is of the kind he is employed to perform;
> (b) it occurs substantially within the authorized time and space limits;
> (c) it is actuated, at least in part, by a purpose to serve the master, and
> (d) if force is intentionally used by the servant against another, the use of force is not unexpectable by the master.
> (2) Conduct of a servant is not within the scope of employment if it is different in kind from that authorized, far beyond the authorized time or space limits, or too little actuated by a purpose to serve the master.[45]

These factors have always been somewhat blurry, necessitating interpretation based on the factual circumstances presented to the court in a given case.[46] Regardless of where the boundary is drawn in any given case, it goes without saying that the existence of a boundary is a given and

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[43] Ruth C. Vance, *Workers' Compensation and Sexual Harassment in the Workplace: A Remedy for Employees, or a Shield for Employers?*, 11 HOFSTRA LAB. L.J. 141, 199 (1993).
[44] Matthew T. Bodie, *Participation as a Theory of Employment*, 89 NOTRE DAME L. REV. 661, 668 (2013).
[45] Restatement (Second) of Agency § 228 (1958).
[46] Johnny Parker, *Company Liability for a Life Insurance Agent's Financial Abuse of an Elderly Client*, 2007 MICH. ST. L. REV. 683, 703 (2007) ("Despite its simplicity, scope of employment is a very vague and nebulous concept. As a term of art: this highly indefinite phrase . . . is so devoid of meaning in itself that its very vagueness has been of value in permitting a desirable degree of flexibility in decisions. It is obviously no more than a bare formula to cover the unordered and unauthorized acts of the servant for which it is found to be expedient to charge the master with liability, as well as to exclude other acts for which it is not.")

is essential to the notion of employer liability under *respondeat superior*. Absent some divide between work and non-work activities, employers would find themselves liable for anything an employee did at work, at home, and everywhere in between.

Like the FLSA, the NLRA, and workers' compensation laws, the goal of the *respondeat superior* doctrine was not to create or enforce a division between work and non-work spheres. Nonetheless, that division is both essential to the doctrine's efficacy and is re-enforced by its application. The work/non-work divide is both a legal and a cultural concept. As the following section will demonstrate, the concept brings with it numerous benefits for both parties in the employment relationship.

B. Benefits of the Divide

For many workers and policy makers, the concept of a sphere of activity that is considered work as opposed to that which is considered non-work or off-duty remains sacrosanct because it protects employers and employees alike in several ways.[47] This section will explore some of the benefits of the divide, including financial, health, and legal benefits to both parties to the employment relationship.

1. *Benefits to Employees*

From the perspective of employees, a divide between work and off-duty time affords employees a measure of privacy and freedom in their personal lives, allows for employees to pursue interests unrelated to their employers' goals, and provides the basis for an attempt at work-life balance.[48] Despite spending significant amounts of time at work and allowing employers access to increasing amounts of personal information, employees consistently say they want to keep their personal lives separate and protected from employers' prying eyes.[49]

In terms of the value of privacy and freedom in one's personal life, it can hardly come as a surprise that employees tend to be protective of their personal spheres. In an empirical study of Millennial workers' attitudes about online privacy, specifically with regard to participation in online social networks,[50] researchers found that a majority of these workers, who tend to be more open and less concerned about privacy generally than prior generations,[51] believe strongly in a separation between work and personal life. In fact, "54% of those surveyed strongly or somewhat agreed that 'work life is completely separate from personal life, and what you do in one should not affect the other.'" In addition, "56% disagreed that 'knowing how a person behaves outside of work hours gives managers insight into whether that person is ready for a

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[47] *See infra* Section I. B.

[48] *See id.*

[49] Patricia Sánchez Abril, Avner Levin, Alissa Del Riego, *Blurred Boundaries: Social Media Privacy and the Twenty-First-Century Employee*, 49 Am. Bus. L.J. 63, 66 (2012) (Employees "generally want privacy from unintended employer eyes, and yet they share a significant amount of personal information online, knowing it could become available to employers and others.").

[50] *Id.* at 97. Abril and her co-authors describe their survey as follows: "Approximately 2500 Canadian and American undergraduate students answered questions relating to their employment status, privacy expectations concerning employer access to their OSN [online social network] profiles, and the existence of and adherence to OSN workplace policies, among other things. These questions were close ended, as respondents chose from a list of various answer choices in multiple choice and Likert-scale format." *Id.* at 97.

[51] *See* Sarah Landrum, *Millennials, Trust And Internet Security*, FORBES (Jun 28, 2017, 10:24 AM), https://www.forbes.com/sites/sarahlandrum/2017/06/28/millennials-trust-and-internet-security/#36787e575555.

promotion.'"[52] In a more global survey, considering workers generally and not only Millennials, researchers found that "95% of employees surveyed agreed an employer had no right to forbid employees from engaging in potentially dangerous hobbies, 93% agreed employers had no right to consider an employee's smoking habits, and 81% thought an employer had no right to consider alcohol use."[53] A number of commentators have observed that employers' use of lawful off-duty conduct to make employment decisions may "alienate employees or applicants, resulting in a diminished ability to recruit competent candidates or retain employees."[54]

In addition, it is widely accepted that "work-life balance," impossible without some separation between work and non-work spheres, is an important feature of a healthy life. As one psychologist described it:

> Work-life balance is important because it affects the well-being of individuals, families, and communities. After all, people need time and energy to participate in family life, democracy, and community activities. They also need time outside of work for rejuvenation, and to develop and nurture friendships and their "non-work selves."[55]

Employees agree. In 2009, research conducted by the Corporate Executive Board concluded that "work-life balance now ranks as one of the most important workplace attributes—second only to compensation. . . . And employees who feel they have a better work-life balance tend to work 21% harder than those that don't."[56] Work-life balance and maintaining significant non-work time are essential to employees' ability to maintain physical and emotional health. As Anne Marie Slaughter recently noted, "Workers across the socioeconomic spectrum, from hotel housekeepers to surgeons, have stories about toiling 12- to 16-hour days . . . and experiencing anxiety attacks and exhaustion. Public health experts have begun talking about stress as an

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[52] Abril, *supra* note 49, at 103. It is important to note that a not insignificant percentage of respondents did not indicate a strong preference for maintaining a divide between work and non-work spheres. "Roughly a third invited the participation of their bosses in their OSNs, with even more reporting that employer access to their social networking profile would not cause them concern. Somewhat surprisingly, a small percentage responded that work and personal life should not be separate. This may indicate a growing trend favoring casual work environments, it may reflect a lack of concern toward transitory 'student jobs,' or it may be indicative of the naiveté of a young demographic with respect to the business world." *Id.* at 109.

[53] Daniel Singer, *Differing Perspectives: Doe v. Department of Justice: Adverse Actions for Off-Duty Conduct: Why the Federal Circuit's Approach Infringes Employees' Privacy Rights*, 20 Fed. Cir. B.J. 169, 189 n. 131 (2010) (citing L. CAMILLE HEBERT, EMPLOYEE PRIVACY LAW § 13:3, at 13-9 (2009)).

[54] *Id.* at 189. *See also* Hebert, *supra* note 53, at § 13:3, at 13-9.

[55] Shawn M. Burn, *How's Your Work-Life Balance?*, PSYCHOLOGY TODAY (Sep. 7, 2015), https://www.psychologytoday.com/blog/presence-mind/201509/hows-your-work-life-balance.

[56] Corporate Executive Board, *The Increasing Call for Work-Life Balance*, 23 PLACES AT 1 TIME (March 27, 2009), https://www.2placesat1time.com/about/newsDetail.aspx?newsID=47. *See also* Sonja S. Carlson, *"Women Directors": A Term of Art Showcasing the Need for Meaningful Gender Diversity on Corporate Boards*, 11 SEATTLE J. SOC. JUST. 337, 386 (2012) ("Company surveys reveal that employees generally rate flexible work arrangements and work-life balance as being "extremely important." (citing CATALYST, WORK-LIFE: PREVALENCE, UTILIZATION, AND BENEFITS 6 (Oct. 29, 2011)).

epidemic."[57] Further weakening of the divide between work and non-work life will only exacerbate these existing concerns to the detriment of workers.[58]

2. Benefits to Employers

From employers' perspective, a strong divide between work and non-work serves several purposes as well. Employers reap financial benefits when their employees maintain a separation between work and personal time both because of worker productivity and loyalty and because the market has recognized work-life balance policies as value-added propositions. In addition, from a legal perspective, employers benefit from a separation between work and non-work spheres in terms of liability and exposure, a benefit that may be impacted by a weakening of the work/non-work divide.

First, employers benefit in real financial terms when their employees feel a sense of work-life balance and maintain non-work interests, activities, and relaxation time.

> Giving workers the flexibility they need to balance work and personal obligations improves the bottom line for corporations in four ways: it increases retention of experienced and valuable employees; it assists in recruiting and diversity efforts; it increases employee loyalty, productivity, and collegiality; and it enhances the corporation's image as a good corporate citizen and employer of choice.[59]

When workers have a separation between work and personal lives, they are less likely to experience "burn-out," which leads to exhausted, cynical, and ineffective employees.[60] In addition to more energized and effective employees, work-life balance creates loyalty among workers and a sense of collegiality in the workplace, which also leads to increased productivity.[61] When employers focus on work-life balance, they see positive effects on employee recruiting and retention.[62] In terms of actual costs, "[s]tandard human resource

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[57] Anne Marie Slaughter, *A Toxic Work World,* N.Y. TIMES (Sept. 18, 2015), https://www.nytimes.com/2015/09/20/opinion/sunday/a-toxic-work-world.html.

[58] If the little non-work time employees maintain is infected by the knowledge that employers are monitoring their activities, emotions, and physiological states during this off-duty time and using that data to determine their workplace opportunities and benefits, the notion of work-life balance will become absurd. If workers' time to devote to "family life, democracy, and community activities," is being "watched" by their employers, they will begin to adjust their off-duty activities to promote their at-work selves and the rejuvenation that health professionals discuss will be elusive at best.

[59] Joan C. Williams, et.al., *Better on Balance? The Corporate Counsel Work/Life Report: The Project for Attorney Retention Corporate Counsel Project Final Report*, 10 WM. & MARY J. OF WOMEN & L. 367, 376 (2004).

[60] *See* Burn, *supra* note 55 ("In contrast to "engaged" employees who display on-the-job energy, involvement, commitment, and a sense of efficacy, "burned-out" employees are exhausted (often physically, mentally, and emotionally), cynical (have negative attitudes about the job, management, and coworkers), and lack efficacy (don't feel like their job or their efforts matter). Burnout has a number of workplace causes, including work overload (unsustainable workloads with no opportunities for recovery)." *See also* Bird, *supra* note 19, at 338 ("Workplace flexibility also enhances employee well-being, which also benefits the firm. Flextime is associated with reduced work pressure and work-life conflict.").

[61] Williams, *supra* note 59, at 376.

[62] Sandra Simpson, *The Elusive Quest for Equality: Women, Work, and the Next Wave of Humanism*, 48 GONZ. L. REV. 279, 297 (2012) ("companies that have implemented work-life balance programs have gained a competitive advantage in attracting talented employees who demand these types of programs.").

estimates are that it costs between 75 percent and 150 percent of a worker's annual salary to replace someone when they leave, with the cost of replacing professionals at the high end of that range."[63] For example, "Deloitte has documented that its improved workplace flexibility programs saved it $27 million in 2003 alone."[64] This cost is the result of "[l]ost institutional knowledge, including the company's way of doing business; [l]ost relationships with internal clients and colleagues; [l]ost productivity as the departing [worker] looks for a new position; [l]ost productivity while the position is unfilled; [and] [a]dministrative costs associated with a departing employee."[65]

The market has also caught on to the financial benefits of maintaining a divide between work and non-work life. "A review of Wall Street Journal announcements found a significant and positive relationship between stock price and the announcement of a work-family initiative. Another study found a similarly positive reaction from the market, especially when the firm was pioneering work-life policy rather than a follower firm adopting the same policy after others."[66]

Second, maintaining a division between work and non-work also has the effect of maintaining employees' sense of personal autonomy over their non-work lives, which in turn benefits their overall well-being and productivity at work. The notion that a person has control over his consumer choices, family life, pleasurable activities, and sources of information all contribute to this sense of autonomy.[67] Any attempts by employers to collect and use this information will ultimately result in a sense of loss of control over them. Edward L. Deci and others have written extensively on the connection between autonomous functioning and overall wellness. "Autonomous self-regulation is central in allowing the individual to choose and most fully develop preferred ways of being, and in doing so to satisfy basic psychological needs which in turn lead to vitality and happiness."[68] Studies have shown that in a variety of areas including education, health, employment, exercise, and political engagement, among others, a feeling of relative autonomy contributes to greater motivation, greater energy, better performance, and more satisfaction.[69] "The findings show that autonomous self-regulation is associated with increased behavioral persistence; improved task performance; and greater psychological, physical, and social wellness."[70]

There is a clear connection between this feeling of autonomy and control over one's life and the individual's ability to perform successfully in various arenas, including the workplace.

> A sense of autonomy has a powerful effect on individual performance and attitude. According to a cluster of recent studies, autonomous motivation promotes greater conceptual understanding, better grades, enhanced persistence at

[63] Williams, *supra* note 59, at 377 (citing JOAN WILLIAMS, UNBENDING GENDER: WHY FAMILY AND WORK CONFLICT AND WHAT TO DO ABOUT IT 88 (2000)).
[64] *Id.* at 378.
[65] *Id.* at 379.
[66] Bird, *supra* note 19, at 336. *But see id.* at 336-337 (describing the negligible effects of work-life balance initiatives for "less skilled workers in male-dominated jobs").
[67] *See* Richard M. Ryan and Edward L. Deci, *A Self-Determination Theory Perspective on Social, Institutional, Cultural, and Economic Supports for Autonomy and Their Importance for Well-Being, in* HUMAN AUTONOMY IN CROSS-CULTURAL CONTEXT 49 (Valery L. Chirkov, Richard M. Ryan, Kennon M. Sheldon, eds., 2011) ("When people are acting autonomously they are fully behind their own actions—they feel choiceful and integrated in behaving.").
[68] *Id.* at 45 (italics removed).
[69] *Id.* at 52-53.
[70] *Id.* at 53. *See generally* EDWARD L. DECI, THE PSYCHOLOGY OF SELF-DETERMINATION (1980).

> school and in sporting activities, higher productivity, less burnout, and greater levels of psychological well-being. Those effects carry over to the workplace.[71]

Numerous studies have documented the connection in the workplace between some level of autonomous functioning and motivation, performance, productivity, and retention.

> One study in Taiwan surveyed 1,380 staff members from 230 community health centers. The more autonomy employees had at work, the more satisfied they were with their jobs and the less likely they were to transfer or leave their positions. Other studies have shown personal autonomy at work correlates to lower turnover among nursing-home workers, higher engagement at work for nurses, and increased job satisfaction among general practitioners in Australia. . . . One study of more than 2,000 people across three continents found that people were nearly two and a half times more likely to take a job that gave them more autonomy than they were to want a job that gave them more influence.[72]

The opposite also appears to be true. Studies of micromanaged employees show that a lack of autonomy at work can lead to "low employee morale, high staff turnover, [and] reduction of productivity. . . The negative impacts are so intense that it is labeled among the top three reasons employees resign."[73] Given this research, it is likely also the case that an employee who feels he is being monitored and, to some extent, controlled by his employer in every facet of his life (including work and personal life), will be less motivated, less creative, and less productive both at work and at home. [74]

In addition to the financial benefits to employers from a division between work and non-work life, there are also legal benefits to this notion. From the perspective of agency law and questions of employer liability, the concept of a divide between work and non-work spheres actually protects employers from liability for their employees' off-duty conduct. As discussed above, the factors courts use to determine the "scope of employment" are somewhat vague,

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[71] DANIEL H. PINK, DRIVE 88-89 (2009). *See also* Belle Beth Cooper, *The key to happiness at work isn't money–it's* autonomy, QUARTZ (May 4, 2016), https://qz.com/676144/why-its-your-call-is-the-best-thing-you-can-say-to-keep-employees-happy/` ("Studies have shown that autonomy makes workers more satisfied with their jobs and increases productivity.").

[72] Cooper, *supra* note 71 (internal quotations omitted).

[73] *Id.* (internal quotations omitted).

[74] There are already studies showing the detrimental physical effects of workplace monitoring. "A 2017 paper by the National Workrights Institute cites a wealth of academic research on the physical and psychological costs that intrusive workplace monitoring can have on employees. A study by the Department of Industrial Engineering at the University of Wisconsin has shown that the introduction of intense employee monitoring at seven AT&T-owned companies led to a 27 percent increase in occurrences of pain or stiffness in the shoulders, a 23 percent increase in occurrences of neck pressure, and a 21 percent increase in back pain." Simon Head, *Big Brother Goes Digital*, N.Y. REVIEW OF BOOKS (May 24, 2018), http://www.nybooks.com/articles/2018/05/24/big-brother-goes-digital/ (citing National Workrights Institute, *Electronic Monitoring: A Poor Solution to Management Problems* (2017)). *See also* Abril, *supra* note 49, at 69 (describing negative effects of workplace monitoring) (citing FREDERICK S. LANE III, THE NAKED EMPLOYEE: HOW TECHNOLOGY IS COMPROMISING WORK-PLACE PRIVACY 11-16 (2003); Maureen L. Ambrose et al., *Electronic Performance Monitoring: A Consideration of Rights, in* MANAGERIAL ETHICS: MORAL MANAGEMENT OF PEOPLE AND PROCESS 61, 69-72 (Marshall Schminke ed., 1998; Jeffrey M. Stanton, *Traditional and Electronic Monitoring from an Organizational Justice Perspective*, 15 J. BUS. & PSYCHOL. 129, 130, 142-45 (2000)). It is not a far stretch to think that monitoring employees in their personal lives will have similarly negative if not worse consequences for employees' mental and physical health.

creating a blurry boundary between work and non-work activity.[75] Nonetheless, the test is an employer's best protective mechanism against liability for employees' activities when they are not "technically" at work.[76] For example, an employee who heads to a bar after a particularly bad day in the office and subsequently ends up in a brawl with another drunk patron is generally not acting within the scope of his employment despite the fact that he ended up in that position because of his experiences at work that day.[77] Similarly, employers are generally not liable when employees get into car accidents on their way to or from work.[78] The separation created by the notion of a "scope of employment" undoubtedly benefits employers who might otherwise be vulnerable to suit for a wide variety of unrelated, unforeseeable, and uncontrollable employee actions. And any expansion of the "zone of conduct" that is related to employment duties[79] would likewise lead to an expansion of employer liability for employee conduct. Erosions or expansions of this doctrine should be an area of concern for employers.

C. Existing Weakening of the Work/Non-Work Divide

Despite statutory and common law-created notions of a work/non-work divide and the benefits of separate spheres to both parties in an employment relationship, a number of legal and societal factors have contributed to a gradual erosion of the separation between these spheres. It is important to both acknowledge this erosion and to highlight the ways in which data analytics can exacerbate this process.

First, the FLSA itself is not effective at creating a separation between work and non-work time for many American workers. The FLSA exempts numerous classes of workers from the Act's overtime protections, "most notably those who are 'employed in a bona fide executive, administrative, or professional capacity.'"[80] This means that any disincentive to merging work and non-work time that is built into the Act's overtime provisions does not apply to an entire segment of the population. In addition, as Shirley Lung has described, "the Act fails to provide workers with any affirmative protection from being compelled to work excessive hours against their will."[81] There is nothing in the statute that restricts the number of hours an employee may be required to work so long as he is paid at the overtime rate for hours in excess of the regular work week.[82] Furthermore, "the Act contains no provisions that guarantee workers a minimum number of rest days" nor does it contain[] [any] safeguards for workers against retaliation for refusing to work overtime, no matter how excessive or unreasonable the employer's demand."[83]

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[75] *See supra* note 46.
[76] *See* Bodie, *supra* note 44, at 668.
[77] *See* Golias v. Wilson, 330 A.2d 96, 97-98 (Conn. Super. Ct. 1974) (Employer was not liable for injuries caused to a third party by the employee when he chose to drive to a physician's office after work for X-rays of an at-work injury since he was not his employer's agent when the accident occurred on the way to the physician's office).
[78] *See*, Faber v. Metalweld, Inc., 627 N.E.2d 642 (Ohio Ct. App. 1992) (employer could not be held liable for employee's negligence while driving to work, even though the accident occurred at the job site); Zandria Banks v. United States, Nos. 1:06CV1630, 1:06 CV 2041, 2007 U.S. Dist. LEXIS 51198, 2007 WL 2114653 at *3 (N.D. Ohio Jul. 16, 2007) (an employee who has a fixed and limited place of employment is not, as a matter of law, in the course of his employment when traveling to and from his workplace).
[79] *See* Bodie, *supra* note 44, at 692-94.
[80] Lung, *supra* note 18, at 58 (quoting 29 U.S.C. § 213(a)(1)).
[81] *Id.*
[82] *Id.*
[83] *Id.*

The employer's resulting exclusive ability to dictate when and how long an employee must work in order to keep his job serves to weaken the notion that employees have designated non-work time that is somehow sacrosanct.[84]

In addition, the increasing reliance on independent contractors as opposed to traditional employees has begun to erode the work/non-work divide. Independent contractors often control the time and location of their work, allowing them to blend work and personal time in ways that a traditional employee cannot.[85] In order to avoid legally mandated costs and retain flexibility in difficult economies, employers are increasingly turning to independent contractors to fill positions that were traditionally held by employees.[86] The advent of the "sharing economy" in which individuals can pick up work and earn money through apps like Uber (car sharing), Taskrabbit (home service tasks), AirBnB (home/room rentals), and Vayable (local tour guides) has further exacerbated this situation.[87] These sharing economy companies allow workers significant flexibility in time and geographic location. A sharing economy worker can work sporadically throughout the day or night, from his home, car, or a coffee shop.[88] While potentially beneficial in creating worker flexibility, these arrangements also significantly contribute to the weakening of the dividing line between work and non-work both for workers in the sharing economy and for workers in traditional employment relationships who are undoubtedly affected by an emerging societal expectation that work can be completed anywhere and anytime.[89]

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[84] *Id.* at 53 ("Overwork, compulsory overtime, and the lack of control that workers exercise over the boundary between work time and private time are among the most troublesome labor conditions that now assail workers in the United States."). There is some good news to be found in state and city experiments with legislation that regulates worker scheduling and attempts to re-assert some worker control over work boundaries. *See, e.g.,* Aaron Moselle & Juliana Reyes, *As Philly considers copying Seattle law making hourly workers' schedules easier, here's how it's working there*, WHYY (Oct. 15, 2018), https://whyy.org/articles/as-philly-considers-copying-seattle-law-making-hourly-workers-schedules-easier-heres-how-its-working-there/ (describing Seattle's "secure scheduling" ordinance as Philadelphia considers similar legislation).

[85] *See* Emily C. Atmore, *Note: Killing the Goose That Laid the Golden Egg: Outdated Employment Laws Are Destroying the Gig Economy*, 102 MINN. L. REV. 887, 905 (2017) (arguing that Uber drivers resemble independent contractors in that they have control over their working hours and location). *See also* Steven Cohen and William B. Eimicke, Independent Contracting: Policy and Management Analysis 10-11 (Aug. 2013), http://www.columbia.edu/~sc32/documents/IC_Study_Published.pdf ("The millennial generation, armed with a MacBook, iPad and iPhone, working out of shared office-spaces, are increasingly attracted to self-employment and contracting, finding it more interesting, lucrative and adaptable to their lifestyles.").

[86] Cohen and Eimicke, *supra* note 85, at 12 ("One of the most frequently cited benefits to employers engaged in independent contracting is the ability to avoid certain fixed costs that are legally required for traditional employees. These include the capital required to support the worker's activities and providing training, as well as complying with the federal and state laws governing employer-employee relations.").

[87] *See* Miriam Cherry & Antonio Aloisi, "*Dependent Contractors" In The Gig Economy: A Comparative Approach*, 66 AM. U.L. REV. 635, 640-42 (2017) (describing the "scope of the on-demand economy"). *See also* https://www.uber.com/; https://www.taskrabbit.com/; https://www.airbnb.com/; https://www.vayable.com/.

[88] *See* Peter Thompson, *New Ways of Working in the Company of the Future*, *in* REINVENTING THE COMPANY IN THE DIGITAL AGE 249, 250 (Francisco González ed., 2014), https://www.bbvaopenmind.com/en/books/reinventing-the-company-in-the-digital-age/ ("We now have a generation of young people joining the workforce who have never known a world without the internet. They expect to be able to communicate with their colleagues wherever they are and whenever they choose. They cannot understand the traditional boundaries between home and work life and the need to be tied to a fixed desk in order to get work done.").

[89] *Id.*

Along with societal changes brought on by sharing economy workers, traditional employees are also increasingly behaving in ways that erode the work/non-work divide. In non-manual labor jobs, employees are now regularly relying on technology to do their work from home, on the road, or anywhere else, and are working "after-hours" because of the ever-present nature of email and other means of connection.[90] As a result of this increase in work locations and hours, the concept of the "scope of employment" has begun to fray as well. For example, whereas employers are not traditionally liable for accidents that occur during an employee's commute, when the employee is driving a company-provided vehicle, this protection from liability is not as clear.[91] In some cases, courts have denied summary judgment to the employer based on "minimal evidence showing that the employer has benefited in any way from the employee's use of the vehicle."[92] The now ubiquitous use of cell phones for personal and work purposes and the fact that many employers provide phones and other technology to their employees has also impacted traditional "scope of employment" analyses. If an employee is in an accident while on the company phone with his employer, courts may consider that to be within the scope of employment.[93] As the notion of job-relatedness expands, employer liability will grow. The fact that the scope of employment has, in recent years, been expanding to employers' detriment is evidence of the importance overall of maintaining some division between work and non-work time.

In addition to employees' use of technology to work at all-hours and from all locations, employees routinely use their company-provided devices both for work and personal activities, further eroding the work/non-work divide. "The overlap between personal spheres and business life spheres has grown significantly with new technological developments. For example, most, if not all, employees access the Internet from work for personal use, at least occasionally."[94] Workers typically sign technology policies in which they acknowledge that the employer has

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[90] *See* James A. Sonne, Monitoring for Quality Assurance: Employer Regulation of Off-Duty Behavior, 43 GA. L. REV. 133, 146-47 (2008) ("Technology has also profoundly transformed the contemporary workplace and the nature of work. As a result, '[o]n-[d]uty and [o]ff-[d]uty [t]ime [h]ave [b]ecome [i]ncreasingly [d]ifficult to [d]istinguish in [o]ur [h]ighly [c]onnected [w]orld.'" (quoting Robert M. Howie & Laurence A. Shapero, *Lifestyle Discrimination Statutes: A Dangerous Erosion of At-Will Employment, a Passing Fad, or Both?*, 31 EMP. REL. L.J. 21, 35 (2005)).

[91] *See* Geoffrey G. Bell, et. al., *Exploring the Case for Expanded Remote Texter Liability for Employers*, 7-16 (August 2018) (unpublished manuscript) (on file with author) (discussing possible liability for employers texting employees who are driving).

[92] *See, e.g.* Clo White Co. v. Lattimore, 590 S.E.2d 381, 383 (Ga. App. Ct. 2003) (finding legal issue regarding scope of employment and employer's liability where evidence exists that employee was on cell phone "regarding matters of company business at the time of the accident" during morning commute). *See generally* Jordan Michael, *Liability for Accidents from Use and Abuse of Cell Phones, When Are Employers and Cell Phone Manufacturers Liable?* 79 N.D. L. Rev. 299 (2003) (discussing when employees are acting within the "scope of employment" such that texting while driving may create liability for the employer). See *also* Roxanne Graham, *As the Scope of Employment Expands, So Does Employer Liability*, WORKFORCE (Dec. 22, 2008), http://www.workforce.com/2008/12/22/as-the-scope-of-employment-expands-so-does-employer-liability/. Cite cases.

[93] *See* Arnieri v. Cornhoff, No. 1:11 CV 1897, 2012 U.S. Dist. LEXIS 154114, at *10 (N.D. Ohio Oct. 26, 2012) ("If the evidence showed that Cornhoff was on a business call at the time of the accident, that might possibly support Plaintiff's position that Cornhoff was in the scope of employment when the accident occurred.").

[94] Shlomit Yanisky-Ravid, *To Read Or Not To Read: Privacy Within Social Networks, The Entitlement Of Employees To A Virtual "Private Zone," And The Balloon Theory*, 64 AM. U.L. REV. 53, 57 (2014). *See also* Mickey Meece, *Who's the Boss, You or Your Gadget?* N.Y. TIMES (Feb. 5, 2011) ("'There's a palpable sense "that home has invaded work and work has invaded home and the boundary is likely never to be restored,' says Lee Rainie, director of the Pew Research Center's Internet and American Life Project. 'The new gadgetry,' he adds, 'has really put this issue into much clearer focus.'").

access to everything the employee does on the employer-provided device.[95] Nonetheless, this technical knowledge rarely stops employees from using those devices for personal email, personal social media networking, and generally communicating thoughts, pictures, and other information that they would not actively want to share with their employers.[96] As Patricia Sánchez Abril and her co-authors have described, Millennials are particularly prone to such activities.

> Millennials are cognizant of their reputational vulnerability on digital media but are not willing to sacrifice Internet participation to segregate their multiple life performances. Lacking the technological or legal ability to shield performances, Millennials rely on others, including employers, to refrain from judging them across contexts. Their stated expectations of privacy, therefore, appear to be somewhat paradoxical: employee respondents generally want privacy from unintended employer eyes, and yet they share a significant amount of personal information online, knowing it could become available to employers and others.[97]

Without giving much thought to the cost, employees routinely sacrifice personal privacy for the sake of convenience. This willful blindness to the ways in which use of company technology erodes employee privacy is another manifestation of the weakening work/non-work divide.

Employees' decreasing attention to privacy concerns, the increase in working hours demanded by employers, new technological devices, and new employment relationship forms have all eroded the work/non-work divide. This blending of work and personal time has some benefits to employees in the form of increased flexibility and to employers in the form of nearly round-the-clock accessibility of workers. At the same time, the existing weakening of the work/non-work divide is already negatively impacting employee health and productivity and further erosions will likely exacerbate this reality.[98] The new ways employers can collect, analyze, and use employees' off-duty data constitutes a dramatic increase in this process of erosion. The existing weakening has largely come about because employees have consciously agreed to expand their working hours and work spaces. The fact that employees perform work in personal spaces and on personal time is merely the tip of the iceberg in terms of possible societal change. The non-transparent use of data analytics to monitor employee behavior, thoughts, and emotions when they are not working and to use this data to make decisions about their workplace success is a far more egregious destruction of the work/non-work divide than we have previously seen with possible negative effects on employee physical and mental health, commitment, and productivity along with the potential for increased employer liability. The next Part will explore several recent employer data analytics programs and proposals and will discuss the ways in which these uses of data may dramatically fuel the weakening of the work/non-work divide and, in particular, how it may negatively impact both parties to the employment relationship.

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[95] *See* Abril, *supra* note 49, at 69-71 (describing rationales for monitoring employees' online activity). *See generally* Jessica K. Fink, *In Defense of Snooping Employers*, 16 U. PA. J. BUS. L. 551 (2014) (explaining legitimate employer reasons for monitoring employees' use of computers and other devices).
[96] *See* Abril, *supra* note 49, at 69-71.
[97] *Id.* at 66.
[98] *See supra* Section I. B.

II. DATA ANALYTICS AND EMPLOYEES' NON-WORK LIVES

The use of data analytics by employers takes numerous forms, some more benign than others. For example, companies have begun to use sentiment analysis—"computer programs that can ingest enormous amounts of writing to try and understand the emotions stirred up by an idea or a Product"—to better understand how their employees are feeling at work.[99] These programs typically rely upon open-ended responses to surveys or communications via the company intranet.[100] The algorithms scan through the employee writing, extract patterns in the wording that indicate emotions, and track trends across the workforce.[101] In many instances, these programs allow real-time tracking of employee sentiments about workplace issues that can allow companies to make significant improvements in their workers' experiences and, presumably, their bottom lines.[102] However, when this ability to detect employee emotions from written communications delves beyond survey responses and internal company networking sites and begins to use data from employee's non-work communications, companies cross into more problematic behavior. It is this overreach into non-work data that is ultimately troubling. The following sections describe several examples of projects in which employers are or may soon begin relying upon non-work data in order to make decisions about their workers and workplaces.[103]

A. Project Comet

There are a number of examples of companies reaching into employees' non-work data with more surfacing every day. Perhaps the most far-reaching is Project Comet, a program that mines data from employees' social media accounts and then analyzes the information for use by the employer.[104] When individuals use social media platforms like Facebook, they "create individualized profiles where they can share status updates, photos, wall posts, and more" and generally post information on their "leisure habits, party and drinking habits, gender, age, sexual preference, parenthood or relationship status; details about their friends, race, language, location, education, and work history; comments reflecting their inner thoughts, views, and attitudes; and other personal data."[105] In terms of size, Facebook alone declared that it has 2 billion active monthly users as of June 2017.[106] Project Comet is a program that collects, analyzes, and makes

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[99] Kaveh Waddell, *The Algorithms That Tell Bosses How Employees Are Feeling*, THE ATLANTIC (Sept. 29, 2016), https://www.theatlantic.com/technology/archive/2016/09/the-algorithms-that-tell-bosses-how-employees-feel/502064/.

[100] *Id.*

[101] *Id.*

[102] *Id.*

[103] This Article is particularly concerned with the use of data analytics to track and evaluate existing employees as opposed to its use in the hiring process to evaluate applicants, which prior scholarship has addressed. *See generally* Bodie, et. al., *supra* note 9 (describing people analytics as applied to hiring decisions). The fairness concerns (as distinct from legal concerns about bias infecting decisions) apply with more force to existing employees as does the notion that data analytics can erode the work/non-work divide.

[104] Memorandum from Michael Gangnath on Project Comet design and functionality (April 1, 2017) (on file with author); E-mail from Michael Gangnath to Leora Eisenstadt (Dec. 21, 2017, 10:17 PM) (on file with author).

[105] *See* Yanisky-Ravid, *supra* note 94, at 61-62.

[106] Anita Balakrishnan, *2 billion people now use Facebook each month, CEO Mark Zuckerberg* says, CNBC (June 27, 2017, 1:06 PM ET, Updated 3:05 PM), https://www.cnbc.com/2017/06/27/how-many-users-does-facebook-have-2-billion-a-month-ceo-mark-zuckerberg-says.html.

use of all of this data. The program uses text mining and data scrapping, tools that search through the entirety of an individuals' social media feed, aggregate the data into a secure database, apply a sorting algorithm, and then classify information into categories for easier interpretation.[107] In terms of privacy considerations, in deploying Project Comet, the company includes a provision in its employment policies alerting workers that it may access social media accounts associated with company log-ins.[108] The company is then able to use the meta-data of its employees through Facebook itself and does not need to have access to the employees' profiles on the front end.[109]

Project Comet is a tool used by a major U.S. healthcare company and has several existing applications with more in development. The tool was first created as a means of building better teams.[110] For this purpose, the algorithm is fed data on existing successful teams, including tens of thousands of variables on the team members' hobbies, consumer preferences, interests, habits, and beliefs that, in combination, create positive working relationships. The program can then search for these variables in all employees and determine how to combine employees into teams to replicate the original successful one. For example, the algorithm could identify that combining workers who drink Sam Adams beer on the weekends and listen to the Rolling Stones with those who support Democratic candidates and like to paint in water colors correlates with positive outcomes.[111] It can then scan all workers' social media profiles for these and other variables and use them to determine working partners, team structures, and group leaders.[112] The second application of Project Comet is in the health insurance context. The employer has begun to mine employees' social media accounts for data on risky behaviors. Data is gathered on likely-for-injury or high-risk activities and individuals are rated accordingly.[113] For example, the program looks for smoking, excessive drinking, and drug use, along with risky sports and the

[107] *See* Memorandum from Michal Gangnath, *supra* note 104.
[108] *Id.* Although the creator of Project Comet no longer had access to the policy used by the company that employs Project Comet, he provided a similar policy in use by another company. That policy includes the following provision in its "Social Media" Policy: "INTERNAL CONTROL: In order to protect the development of IP and confidential information [company] reserves the right for access and monitoring of systems and accounts that maintain, record, or access any and all components of confidential property. This information will be aggregated and anonymized."
[109] *See* E-mail from Michael Gangnath to Leora Eisenstadt, *supra* note 104.
[110] *Id.*
[111] *See id.* Remarkably, if Project Comet and others like it are gathering this data directly from Facebook (and other social media apps), they may be able to include information that never actually made it onto a post. Facebook tracks what it calls "self-censorship," when an individual edits or deletes a comment or post before sharing. *See* Sauvik Das and Adam Kramer, *Self-Censorship on Facebook*, PROC. 7TH INT'L ASS'N ADVANCEMENT OF ARTIFICIAL INTELLIGENCE CONF. ON WEBLOGS AND SOCIAL MEDIA (2013), https://www.aaai.org/ocs/index.php/ICWSM/ICWSM13/paper/viewFile/6093/6350. If companies have access to self-censorship data, they can actually include in their matrix of information, the comments, ideas, photos, and the like that employees did not intend to share.
[112] *See* E-mail from Michael Gangnath to Leora Eisenstadt, *supra* note 104. The approach Project Comet takes is similar to that used by Target to determine which of its customers were pregnant with the aim of improving targeted advertising. The algorithm takes seemingly unrelated purchasing histories and makes remarkably accurate predictions about its customers pregnancy status. "For example, according to Target's algorithm, there is an 87% chance that a twenty-something year old woman who buys cocoa butter lotion, a purse big enough to be a diaper bag, supplements, and a colorful rug in March is pregnant and due in late August." Bradley Areheart & Jessica Roberts, *Genetic Privacy*, 128 YALE L. J. (forthcoming 2019) (manuscript at 41) (on file with author) (citing Charles Duhigg, *How Companies Learn Your Secrets*, NEW YORK TIMES MAG. ONLINE (Feb. 16, 2012).
[113] *See* E-mail from Michael Gangnath to Leora Eisenstadt, *supra* note 104.

like.[114] Once employees are rated, the company considers trends across geographic areas and determines insurance rates accordingly. If, for example, the program finds that employees in the Midwest have overall higher risk ratings than those on the West Coast, the company will set health insurance rates for the Midwest employees higher than for West Coast employees.[115]

In addition to these existing applications, Project Comet may soon be used for numerous other purposes. The program can analyze social media data to determine the best seating arrangements for employees.[116] It may be used to determine which employees possess leadership capabilities and should be given additional training or professional development opportunities.[117] And, eventually, the program may assist managers in selecting candidates for downsizing or for promotions.[118] If the algorithm can be provided with variables that correlate with workplace success or failure, this can be applied on a massive scale to make employment-related decisions. There is no need to demonstrate how or why these variables correlate with success or failure—evidence of causation is irrelevant. If the algorithm can predict with 99% accuracy, correlation is all that matters.[119]

Needless to say, programs like Project Comet are using data analytics in new and somewhat troubling ways. Comet accesses and analyzes non-work-related data. It scours employees' social media accounts for information on their off-duty behaviors, interests, and preferences and then uses that data to build effective teams, adjust their health insurance rates, or predict their workplace success.[120]

B. Castlight Health

In the area of health management, Castlight Health ("Castlight") stands out as a company using data analytics in the workplace in new and possibly troubling ways. Castlight is a third party entity that provides services through an employer to its employees, including the ability to

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[114] *Id.*
[115] *Id.*
[116] *Id.*
[117] *Id.*
[118] *Id.*
[119] *Id. See also* Sigal Samuel, *Artificial Intelligence Shows Why Atheism Is Unpopular*, THE ATLANTIC (July 23, 2018), https://www.theatlantic.com/international/archive/2018/07/artificial-intelligence-religion-atheism/565076/ (discussing algorithms used to determine what factors correlate with secularization versus increased religiousity and possible extremism) ("I lose sleep at night on this. ... It is social engineering. It just is—there's no pretending like it's not." But he added that other groups, like Cambridge Analytica, are doing this kind of computational work, too. And various bad actors will do it without transparency or public accountability."). These types of models are being used in various ways in society and it is not a far stretch to imagine employers using them to predict workplace success.
[120] Although there have been numerous reports of employers screening social media posts and making employment decisions based on those posts, the way in which Project Comet acquires and uses social media data is particularly new. Prior reports have detailed instances in which employees post negative comments about employers or make derogatory statements about co-workers and others, the employee's social media "friends" voluntarily share the posts with the employer, and then the employer takes disciplinary action against the employee as a result. *See* Yanisky-Ravid, *supra* note 94, at 69-71 (detailing examples of a nurse, a daycare center employee and a police department employee who were all terminated under these circumstances). Project Comet is perhaps more troubling because of its use of benign non-work-related data and its lack of transparency to workers. In Project Comet, all data is useful to the employer, not merely comments about the employee's workplace. Instead, data about the employee's hobbies, consumer preferences, and thousands of other variables become relevant without the employee fully realizing that this is happening.

track health care spending and search for in-network doctors.[121] Castlight is an optional service; however, when employees opt in, they give permission to Castlight to share their data with the employer.[122] The company counts several major employers as clients, including Walmart and Time Warner and thus potentially has access to data on millions of employees.[123]

The data Castlight collects and shares decidedly involves employees' non-work activities, plans, and even thoughts. It has the ability to identify segments of the employee population that are contemplating major health decisions. For example, through internet searches, physician specialist searches and requests, and changes to prescription purchases, Castlight can identify which employees are contemplating becoming pregnant, which employees are concerned about developing diabetes, or those who believe they may need back surgery in the near future.[124] The company claims that although it can identify precisely which individuals are contemplating these health changes, it only shares "top-level numbers with its client."[125]

> For example, Castlight can tell a client that its workforce includes 60 women who are currently trying to have children, but it will not disclose the names of those employees. It also caps the size of any group it will single out at 40 people, since it believes that any smaller group could allow the client to identify the individual employees.[126]

Of course, depending on the size of the employer or the department being considered, the demographic makeup of the workforce, and particularly with respect to those contemplating pregnancy, the number of fertile-age women, it may not be difficult for an employer to identify specific employees despite Castlight's self-imposed restrictions.[127] And even without the ability to pinpoint specific individuals, the knowledge that a certain percentage of its workforce is contemplating pregnancy or expecting a life-changing diagnosis could still lead the company to make decisions about promotions, hiring, and terminations based on this information. As one scholar has noted, "If [an employer] originally thought that 15% of the women in its employee base may become pregnant, but data shows it's closer to 30%, that could lead an employer to say we cannot hire as many female employees this year because we can't afford them being out for family leave."[128]

This health-related data, which appears to be so personal in nature, may be accessed and shared because the Health Insurance Portability and Accountability Act of 1996 (HIPAA), which mandates protection of certain health information, likely does not apply to data gleaned from

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[121] Valentina Zarya, *Employers Are Quietly Using Big Data to Track Employee Pregnancies*, FORTUNE (Feb. 17, 2016), http://fortune.com/2016/02/17/castlight-pregnancy-data/. *See also* Areheart & Roberts, *supra* note 112, at 42-43.
[122] *Id.*
[123] *Id.*
[124] *Id.*
[125] *Id.*
[126] *Id.*
[127] *Id.* As Nicholas Terry has commented, "You might as well put employees' pictures on a bulletin board." *Id.* Moreover, as James Hodge notes, "the data gathered by the company could still be used to penalize employees who did not opt in. 'You only need a random sampling and you can then extrapolate meaningful and actionable data' based on a significant sample. In other words, Walmart doesn't need every one of its 1.4 million U.S. employees to opt in to Castlight—it can make do with a few thousand." *Id.*
[128] *Id.*

search queries and insurance claims.[129] Similarly, the Pregnancy Discrimination Act, which is an amendment to Title VII of the Civil Rights Act of 1964 and makes clear that discrimination on the basis of pregnancy is a form of discrimination 'on the basis of sex'[130] may not apply here either since its provisions cover pregnancy and related conditions and not those who are merely contemplating pregnancy and face adverse employment decisions on that basis.[131]

As is likely obvious, the information that Castlight collects and shares with employers may be useful for making work-related decisions but is based on the off-duty activities, thoughts, and concerns of workers. An individual's plans to enlarge her family or worries about developing a disease may have an impact on her work but it is not data generated during the work day. It is this encroachment into employee's personal, non-work life that is particularly troubling.

C. Wearable Tracking Devices

In the realm of health-related data gathering by employers, the use of Fitbits and other wearable tracking devices stands out both for its enormous potential to provide cost-savings for employers and for the massive quantity of personal information that is being aggregated and analyzed when employers provide these devices. Elizabeth Brown, who has written extensively on the prevalence of wearable health tracking devices as a part of voluntary employee wellness programs, notes that "[t]he popularity of workplace wellness programs is growing."[132] As of 2015, "70% of U.S. employers offer a general wellness program [and] [a]nother 8% planned to offer them in the following twelve months."[133] Many employer-sponsored wellness programs incorporate the use of Fitbits or other wearable tracking devices both because of incentives created by insurance providers and because they are viewed as motivators for employees to focus on their health.[134] These devices are typically offered on a voluntary basis along with a financial incentive like reduction of health insurance costs or a financial penalty for refusing to

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[129] *Id. See also* Bodie, et. al. *supra* note 9, at 999 (discussing the aggregation of pregnancy planning and other data and noting that "such aggregation can feel disturbing, even threatening, to employees, as it gives the employer an informational advantage. But currently, there is little in the way of legal protection against such aggregation. If the data is legally obtained, it can generally be analyzed however the employer sees fit.").

[130] Deborah Widiss, *Gilbert Redux: The Interaction of the Pregnancy Discrimination Act and the Amended Americans with Disabilities Act*, 46 U.C. DAVIS L. REV. 961, 963 (2013) (citing Pub. L. No. 95-555, 92 Stat. 2076 (1978) (codified at 42 U.S.C. § 2000e(k) (2012))).

[131] There may be an argument to be made that an adverse action based on an employee's contemplation of pregnancy constitutes unlawful sex discrimination under Title VII since only women can become pregnant. *See* Int'l Union v. Johnson Controls, 499 U.S. 187 (1991) (holding that employer's policy of excluding women who were pregnant or capable of bearing children from jobs involving lead exposure was impermissible sex discrimination under Title VII).

[132] Elizabeth A. Brown, *Workplace Wellness: Social Injustice*, 20 N.Y.U. J. LEGIS. & PUB. POL'Y 191, 200 (2017) (citing Soc'y for Human Res. Mgmt., 2015 Employee Benefits: An Overview of Employee Benefits Offerings in the U.S. (2015), *https://www.shrm.org/hr-today/trends-and-forecasting/research-and-surveys/Documents/2015-Employee-Benefits*.pdf.).

[133] *Id.*

[134] *Id.* at 202-203 ("For example, Appirio, a Bay Area startup, negotiated a $ 300,000 discount on its $ 5 million insurance costs by agreeing to share employee health data with its insurer and showing that the staff's health was improving. Insurers are working closely with employers to facilitate programs like these. United Health Group, Humana, Cigna, and Highmark have all developed programs that help their employer-clients integrate wearable devices like the Fitbit into the workplace.").

participate.[135] The wearable devices are particularly attractive because they gather real-time data on employees' physical activity, heart rate, glucose levels, body temperature, and other physiological variables.[136] The data that is collected is then analyzed by third parties, shared with the employer, and often shared with the employer's insurance providers.[137]

There are multiple reasons why an employer might want to offer tracking devices as part of its benefits. Most compelling is the opportunity to immediately reduce insurance costs simply by providing the devices to employees. In a number of cases, employers were able to negotiate discounts in health insurance costs of several hundred thousand dollars by including Fitbits in employee wellness programs.[138] In addition, many employers believe that the wearable devices will lead to employees improving their own health through exercise, diet changes, and the like, which will, in turn lead to reduced insurance costs overall.[139] Finally, as Brown has pointed out, "Employee health data collection is big business."

> In January 2016, a consortium of companies including Humana, IBM, Johnson & Johnson, Merck, PepsiCo, and Unilever proposed a plan to disclose their employees' health data to shareholders in their annual reports, 10-K reports, and other corporate disclosures. The collection and disclosure of employee health information is on par with earnings, expenses, and other key economic data that affects a company's profitability and attractiveness to investors.[140]

Like the data gathered by Castlight, the protections of HIPAA may not prevent the use of this data by employers. HIPAA applies only to "covered entities" which include health care providers, health plans, employers, and health care clearinghouses.[141] As a result, if health data is passed to a third party to analyze, HIPAA may not apply.[142] If the employer is only using the end-result of that analysis and not the data itself, the federal law protecting health-related information may not come into play at all. Likewise, the Americans with Disabilities Act ("ADA"), which protects against discrimination based on disability, deals with "impairment[s] that substantially limit[] one or more major life activities"[143] and not the more basic physiological markers that tracking devices measure.[144]

Thus far, it appears that employers are primarily using the data to demonstrate to insurance companies and investors that their workers have improving health but once accessible, the data could obviously be used in other ways as well. Like Project Comet's risk rating, Fitbit data might be used to determine insurance rates for a particular workforce. In addition, data on heart rate, exercise level, and sleep patterns could be analyzed along with effective workplace

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[135] *Id.* at 197-98. *See also* Adam Satariano, *Wear This Device So the Boss Knows You're Losing Weight*, BLOOMBERG (Aug. 21, 2014, 1:26 PM), http://www.bloomberg.com/news/articles/2014-08-21/wear-this-device-so-the-boss-knows-you-re-losing-weight.
[136] Brown, *supra* note 132, at 202.
[137] *See* Satariano, *supra* note 135.
[138] *See* Brown, *supra* note 132, at 201-03.
[139] *See* Satariano, *supra* note 135.
[140] Brown, *supra* note 132, at 202.
[141] *Id.* at 206-07.
[142] *Id.* Moreover, Brown notes that there is no private right of action under HIPAA and only the Department of Health and Human Services can investigate and impose penalties, further reducing the statute's ability to impact this area. *Id.* at 207-08.
[143] Americans with Disabilities Act of 1990, 42 U.S.C. § 12102(1)(A) (2018).
[144] Brown, *supra* note 132, at 208.

performance and ultimately used to predict workplace success or ultimate cost to an employer. It is not difficult to imagine an employer relying on physiological data gathered during an employee's non-work time to make decisions about his future in the workplace.[145]

D. Sentiment Analysis and Facial Scanning

A number of companies are looking beyond data on employees' activities and physiology and trying to delve into their emotional states with the aim of improving productivity as a result. One such company, Kanjoya, has begun advertising "sentiment-analysis tools" that perform "'employee engagement tracking' which promises to trace positive or negative emotions over time, and a search function that responds to queries with an analysis of the sentiment surrounding it."[146] This tool and others like it are in use in numerous workplaces like IBM, Twitter, and others and generally pull data from the company's existing internal social networking platform or with internal company surveys.[147] The programs track the wording used in posts or survey responses, identify patterns, and detect the sentiment behind the words expressed. Thus far, companies have reported using sentiment analysis tools only on internal workplace posts and comments and not on non-work emails, social media posts, and the like. However, given Project Comet's use of employees' social media data to build teams and determine risky behaviors, it seems likely that sentiment analysis software will soon be put to use on non-work-related social media platforms and the data they generate.[148]

One set of computer scientists at Sathyabama University in India has recently proposed using machine learning to detect employee emotions in another way—facial scanning software.[149] The scientists contend that it is useful to track employee emotions since they directly influence the major sources of competitive advantage. As a result, if an organization can detect and alter an employee's negative emotion, it may be able to "make it right before it affects . . . productivity."[150] They propose to use facial scanning software to detect human emotions from the employee's image, captured as the individual enters the workplace at the start of the workday.[151]

The proposed system would operate much like a system in which employees swipe an ID card to demonstrate their presence at work. Instead of a card swipe, a camera would capture a picture of the employee's face upon entering the workplace. "As each face is captured they are

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[145] In addition to programs encouraging the use of wearable health-tracking devices, some companies are mandating that their employees install GPS monitoring on their company provided cell phones. *See* David Kravets, *Worker fired for disabling GPS app that tracked her 24 hours a day,* ARSTECHNICA (May 11, 2015, 12:41 PM), https://arstechnica.com/tech-policy/2015/05/worker-fired-for-disabling-gps-app-that-tracked-her-24-hours-a-day/. In a lawsuit by one employee who claims she was fired for uninstalling the GPS app, the plaintiff claimed her employer admitted that "employees would be monitored while off duty and bragged that he knew how fast she was driving at specific moments ever since she installed the app on her phone." *Id.*

[146] Kaveh Waddell, *The Algorithms That Tell Bosses How Employees Are Feeling*, THE ATLANTIC, Sept. 29, 2016, https://www.theatlantic.com/technology/archive/2016/09/the-algorithms-that-tell-bosses-how-employees-feel/502064/.

[147] *Id.*

[148] *See id.* (noting that Kanjoya refused to comment on its privacy policy).

[149] R. Subhashinia and Niveditha. P.R, *Analyzing and Detecting Employee's Emotion for Amelioration of Organizations*, 48 PROCEDIA COMPUTER SCIENCE 530 (2015).

[150] *Id.* at 531.

[151] *Id.*

analysed [sic] simultaneously and results are displayed."[152] The eyes and lips are separated and compared to images in a database. This comparison detects the individual's emotion at that moment. The purpose, as described by its creators is to improve productivity: "It shows whether they are happy, sad, depressed or angry. This analyzing makes a better working environment for a better productivity."[153] Given that this program analyzes employees' emotional states when they arrive at work, it is, in fact, gathering data on their personal lives. Whether workers had a stressful morning, a difficult commute, a sleepless night, or an argument with a spouse may inform their emotional states upon entering the workplace. The fact that gathering data on these emotions may positively impact productivity does not alter the reality that this technology would constitute an intrusion into the personal lives and emotions of workers. In fact, it is clear that all of these examples of data analytics can be beneficial to employers. The question is: at what cost?

III. EXISTING SCHOLARSHIP & NEW PROBLEMS OF OFF-DUTY DATA

Before considering the ways in which use of off-duty data will further erode the work/non-work divide and negatively impact the employment relationship, it is important to acknowledge existing critiques of the ways that employers routinely monitor their employees. Scholars have decried a variety of such employer programs on numerous grounds. This Part will explore existing scholarship on off-duty conduct use and on workplace data use. Section A will consider employers' existing use of off-duty conduct information, scholars' objections to those incursions into employees' lives, and their implications for the data analytics programs discussed above. Section B will highlight some of the major research that has begun to consider the problematic nature of data analytics in the workplace, meaning the use of massive quantities of data created by workers at work. This Section will focus specifically on scholars' concerns about privacy incursions, the ability of algorithms to perpetuate bias, and the danger of inaccurate information becoming trapped in the system. To date, scholars have largely explored either employers' transparent use of off-duty behavior or employers' use of data created in the workplace. This Article's new contribution to the field focuses on the intersection of these two areas—employers' use of off-duty data. It is the use of data analytics to analyze off-duty behaviors, thoughts, and feelings and the new capacity for digestion of massive amounts of information in far less transparent ways that changes the discussion so dramatically. Beyond concerns about privacy, bias, and basic fairness, the use of off-duty data also has the potential to erode the work/non-work divide and damage employers as much as it harms employees.

A. Non-Data Driven Off-duty Conduct

In recent years, employers have begun asking about or looking into their employees' off-duty lives with greater regularity. As health care costs increasingly become major priorities for businesses, employers have begun inquiring into employees' off-duty smoking and drinking habits specifically and penalizing employees whose answers are perceived as costing the

[152] *Id.*
[153] *Id.*

employer more in benefits.[154] In a 60 Minutes story in 2005, journalist Morley Safer profiled two women who worked for Weyco, an insurance consulting firm outside of Lansing, Michigan. At a meeting to discuss employee benefits, the company president announced that "As of January 1st, 2005, anyone that has nicotine in their body will be fired."[155] The company gave employees fifteen months to quit smoking and then subjected them to random nicotine testing, firing those employees who failed the test.[156] A number of other employers, particularly in the healthcare industry, have enacted similar bans on hiring smokers.[157] Many more have created wellness programs asking employees to voluntarily share their "health, eating and sexual habits" in exchange for credits on their health insurance premiums.[158] While these employers do not openly claim to take adverse actions against employees with undesirable habits, academics and others are wary of turning over such information to employers who may eventually use the information in other ways.[159]

Beyond health information and perhaps spurred by technology that more easily provides a window into workers' personal lives, employers are increasingly taking notice of employees' off-duty activities and taking adverse actions against those employees whose behaviors are seen as reflecting negatively on the employer or as being in conflict with the employer's values. In 1993, Walmart terminated two employees for violating its policy that barred a "dating relationship between a married associate and another associate, other than his or her own spouse."[160] In 1999, an Arizona healthcare system fired two nurses for running a sexually explicit website on their own time because it violated the organization's policy against "immoral or indecent conduct while on or off duty."[161] In 2007, the Olive Garden restaurant terminated a supervisor for posting pictures on MySpace of herself and her underage daughter along with other employees "hoisting empty beer bottles" and contended that "the photos could damage the company's brand."[162] More recently, at least three people who attended the white supremacist

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[154] *See* 60 Minutes: Whose Life Is It Anyway? Are Employers' Lifestyle Policies Discriminatory? (CBS television broadcast Oct. 30, 2005), available at https://www.cbsnews.com/news/whose-life-is-it-anyway/.

[155] *Id.*

[156] *Id.*

[157] *See U Penn's head of smoking treatment says no-hire rule for smokers is 'regressive'*, WHYY (Feb. 20, 2013), https://whyy.org/articles/u-penns-head-of-smoking-treatment-says-no-hire-rule-for-smokers-is-regressive/. A number of healthcare systems have enacted policies banning the hiring of smokers. The Cleveland Clinic was one of the first to stop hiring smokers in 2007 followed by numerous others including the University of Pennsylvania Health System. *Id.*

[158] *See* Brown, *supra* note 132, at 197-98.

[159] *See U Penn's head of smoking treatment says no-hire rule for smokers is 'regressive'*, WHYY (Feb. 20, 2013), https://whyy.org/articles/u-penns-head-of-smoking-treatment-says-no-hire-rule-for-smokers-is-regressive/ ("Mark Rothstein, a bio-ethics professor at [University of] Louisville . . . says wellness programs may lead to better health, but questions whether people can trust in the confidentiality of the questionnaire they filled out. 'People who work for employers who perhaps don't have the best record of keeping privacy might well be concerned that the information could filter back to the company. And they could be adversely treated.'").

[160] Sonne, *supra* note 90, at 140 (citing Jacques Steinberg, *Fraternization and Friction in the Store Aisles: New York Challenges Wal-Mart over Dismissal of Two Who Dated Against the Rules*, N.Y. TIMES, July 14, 1993, at B1; *see also* State v. Wal-Mart Stores, Inc., 621 N.Y.S.2d 158, 159 (App. Div. 1995) (involving challenge to Wal-Mart policy under New York's "recreational activities" protection)).

[161] *Id.* at 140 (citing FREDERICK S. LANE III, THE NAKED EMPLOYEE: HOW TECHNOLOGY IS COMPROMISING WORKPLACE PRIVACY 4, 231-32 (2003)).

[162] Don Aucoin, *MySpace vs. WorkPlace*, BOSTON GLOBE, May 29, 2007, at D1 (*cited in* Sonne, *supra* note 90, at 141).

rally in Charlottesville, Virginia in 2017 were fired after social media users identified them from photographs of the event, and their employers faced a flood of calls for their terminations.[163]

Generally speaking, despite the variety of reasons for these terminations, at-will employment, the default rule in virtually every jurisdiction in the U.S., gives employers the right to terminate an employee at any time, for any reason or no reason at all so long as the reason is not unlawful.[164] Absent a contract or some express law to the contrary, employers have the right to ask for information about an employee's off-duty habits, thoughts, and activities and to take action against them in the workplace based on that information.[165] While this may offend basic conceptions of privacy, for the most part the at-will doctrine trumps notions of privacy and fairness.[166] Nonetheless, this is an area in which scholars have advocated for increased regulation. As Michael Selmi has noted, "Privacy as a concept involves fundamental issues of human dignity, autonomy, and the right of individuals to have some control over their public persona. Even outside the workplace, this is a difficult concept to define, but without a modicum of privacy we would hardly be who we are."[167] To that end, Selmi has argued for a narrow definition of the workplace and employers' interests. "It is one thing to give an employer broad dominion over its own workplace but quite another to extend that dominion wherever the employee goes."[168] In addition, Selmi looked to tort law and its ability to protect employees, proposing an extension of the tort of wrongful termination in violation of public policy "to include all off-work activity, and require the employer to substantiate a legitimate business interest that outweighs the employee's interests in order to uphold a termination for off-work activity."[169] Similarly, in considering cases in which employers take adverse actions against employees based on their off-work personal associations, Terry Moorehead Dworkin has proposed a standard in which employers must demonstrate a "reasonable business necessity" in interfering in their employees' personal lives, requiring "a showing of a detrimental business

[163] Naomi LaChance, *More Nazis Are Getting Identified And Fired After Charlottesville*, HUFFINGTON POST (Aug. 16, 2017), https://www.huffingtonpost.com/entry/more-nazis-are-getting-identified-and-fired-after-charlottesville_us_599477dbe4b0eef7ad2c0318.

[164] *See* Sonne, *supra* note 90, at 142.

[165] *Id.* at 143.

[166] As Michael Selmi has noted, "As a basic precept, it is difficult to reconcile workplace privacy with the at-will relationship." Michael Selmi, *Privacy for the Working Class: Public Work and Private Lives*, 66 LA. L. REV. 1035 1036 (2006).

[167] *Id.* at 1045.

[168] *Id.* at 1046.

[169] *Id.* at 1052-53. ("When an employee is terminated because of speech that touches on a matter of public concern, courts conduct a balancing test that weighs the competing interests. The test developed in the speech context can be quite deferential to employers, and if the speech is not a matter of public concern, the employee is afforded no protection at all and the employer need not offer any justification for its action. As a result, I would propose that any time an employer terminates an employee for lawful off-work activity, the employer must provide a compelling justification for its action sufficient to override the employee's substantial interest in off-work autonomy."). *See generally* Bijal J. Patel, Comment, *MySpace or Yours: The Abridgement of the Blogosphere at the Hands of At- Will Employment*, 44 HOUS. L. REV. 777 (2007) (arguing for expansion of the public policy exception to the employment at-will doctrine to protect privately-employed workers who engage in off-duty blogging); Shelbie J. Byers, Note, *Untangling the World Wide Weblog: A Proposal for Blogging, Employment-At-Will, and Lifestyle Discrimination Statutes*, 42 VAL. U. L. REV. 245 (2007) (proposing a model lifestyle discrimination statute to protect off-duty blogging by private at-will employees).

connection between the employee's off-the-job actions and a legitimate business interest of the employer."[170]

In addition to tort law, a number of states have passed lifestyle discrimination statutes that limit the at-will rule by prohibiting adverse actions based on employees' lawful off-work activities.[171] Several of these laws generally bar adverse actions while others more narrowly prohibit terminations on the basis of lawful off-duty behavior generally or off-duty use of specific lawful products.[172] A number of scholars have argued for the expansion of these laws to protect the privacy of workers' personal lives.[173] For example, Anna Rives has proposed federal lifestyle discrimination legislation based on the off-duty conduct statutes in New York and North Dakota, arguing that given the national and global nature of business, both employers and employees would benefit from consistency and certainty in protection of off-duty conduct across all states.[174] In a similar attempt to balance fairness and privacy concerns in the off-duty smoking context, Karen Chadwick has proposed a scheme in which employers may not terminate or refuse to hire employees on the basis of smoking habits while also permitting employers to allocate some of the costs associated with employing smokers onto the smokers themselves.[175] Finally, Marisa Pagnattaro has proposed off-duty conduct legislation that attempts to "balance[e] reasonable rights of privacy with the needs of employers" by protecting a wide swath of lawful off-duty behavior, speech, and association while maintaining exceptions for instances in which the off-duty conduct "creates a material conflict of interest" with an aspect of the employer's business or where the off-duty activity "subjects the employer to liability for the individual's actions."[176]

B. Workplace Data Analytics

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[170] Terry Morehead Dworkin, *It's My Life - Leave Me Alone: Off-The-Job Employee Associational Privacy Rights*, 35 AM. BUS. L.J. 47, 84 (1997). *See also* Frank J. Cavico, *Invasion of Privacy in the Private Employment Sector: Tortious and Ethical Aspects*, 30 HOUS. L. REV. 1263, 1307 (1993) (describing employer's consideration of "off-the-job activities" of its employees as potential "invasion of privacy" concern). Cavico argues that "[t]he employer's initial obligation is to acquire and retain only such individually identifiable employee information that is directly pertinent to, and necessary for, effective performance, competent management, or some other appropriate business purpose. The employer generally does not possess a legitimate right to know certain aspects of an employee's personal life, such as humiliating illnesses, failure to pay debts, and details concerning an employee's sex life." *Id.* at 1324.

[171] *See* Sonne, *supra* note 90, at 170-78. *See also* Marisa Anne Pagnattaro, *What Do You Do When You Are Not at Work?: Limiting the Use of Off-Duty Conduct As the Basis for Adverse Employment Decisions*, 6 U. PA. J. LAB. & EMP. L. 625, 640-43 (2004).

[172] *See* Pagnattaro, *supra* note 171, at 640-43.

[173] *See* Anna L. Rives, *You're Not the Boss of Me: A Call for Federal Lifestyle Discrimination Legislation*, 74 GEO. WASH. L. REV. 553, 564-65 (2006).

[174] *Id*. Rives' proposal includes broad protections for employees based on lawful off-duty conduct but allows employers freedom to differentiate in health and life insurance policies between employees based on use of lawful substances if based on actuarially justified differences in the provision of benefits. *Id.* at 565.

[175] Karen L. Chadwick, *Is Leisure-Time Smoking a Valid Employment Consideration?*, 70 ALB. L. REV. 117, 140-41 (2006) ("Under a balanced approach, state statutes could proscribe making hiring and firing decisions based on smoking. At the same time, these statutes could also provide that costs reasonably associated with the hiring and retention of smoking employees may be passed on by the employer to employees who smoke. Under this statutory scheme, it would be legitimate to charge employees who smoke a surcharge for health insurance, life insurance, or short-term disability so long as the employer can establish that, statistically, smokers drive up those premiums or costs.").

[176] Pagnattaro, *supra* note 171, at 680-82.

In addition to the research on employers' use of off-duty conduct to make adverse employment decisions, scholars have also begun to evaluate workplace use of data analytics, focusing largely on data created in the workplace or relied on during the hiring process. Thus far, research has generally focused on three primary areas. Scholars are tackling (1) questions about fairness and transparency particularly related to inaccurate data that is then trapped in the system, (2) concerns over bias infiltrating the algorithms that assess applicants and employees, and (3) unease about violations of privacy rights in the operation of data analytics programs.

In terms of overall fairness and transparency concerns, Matthew Bodie, Miriam Cherry, Marcia L. McCormick, and Jintong Tang's recent paper provides a thoughtful survey of the major issues that should be considered as more companies begin to employ people analytics in some form.[177] Bodie and his co-authors are primarily concerned with the use of people analytics as a component of personnel decision-making and particularly in hiring decisions. The article describes the use of people analytics games that are used in the interview process along with online personality testing. Bodie and his co-authors consider the privacy implications of these new technologies and note that employees' awareness of employer monitoring is essential to fairness and legality but that "broad, vague, and undifferentiated consent" obtained at the beginning of the employment relationship may also be "legally insufficient." [178] In terms of information processing, the authors raise numerous concerns including (1) "mission creep" in which data may be used and reused for purposes unrelated to those that motivated the original data collection, and (2) accuracy concerns, which are particularly troubling in non-transparent uses of data as the employee must "trust that the data is accurate and the algorithms are meaningful" even when used to make important employment decisions.[179] In addition, the authors consider the privacy implications of employers sharing employee data with third parties and examine the minimal statutory and common law protections that exist in this area.[180]

In terms of discrimination concerns specifically, several recent papers point out the troubling nature of data collection and use in the workplace. First, Solon Barocas and Andrew Selbst argue that the reliance on predictive analytics in particular can perpetuate, reproduce and even exacerbate existing biases. "Approached without care, data mining can reproduce existing patterns of discrimination, inherit the prejudice of prior decision makers, or simply reflect the widespread biases that persist in society."[181] Despite this reality, Barocas and Selbst demonstrate how existing law largely fails to protect against this data-based discrimination, looking specifically at Title VII and its prohibitions. The authors first conclude that intentional or disparate treatment discrimination under Title VII does little to protect against biased results from reliance on data, because, aside from one feature of data analytics, the problematic bias is largely implicit or unconscious, and Title VII is ill-equipped to handle this form of discrimination.[182] In looking to disparate impact discrimination under Title VII, Barocas and Selbst similarly acknowledge the limited efficacy of Title VII because of the available defenses to disparate impact discrimination, concluding that "there is good reason to believe that any or all of the data mining models predicated on legitimately job-related traits pass muster under the business necessity defense."[183] In addition, should a court conclude that a data mining project in

[177] Bodie, et. al., *supra* note 9.
[178] *Id.* at 992. *See also id.* at 987-88, 989-99, 10002.
[179] *Id.* at 999-1000.
[180] *Id.* at 1002-1007.
[181] Barocas & Selbst, *supra* note 9, at 674.
[182] *Id.* at 694-701.
[183] *Id.* at 709.

fact creates an unlawful disparate impact, an employer may still avoid liability by demonstrating that there is no "alternative, less discriminatory practice that accomplishes the same goals."[184] The authors consider a variety of problems with possible reforms, both technical and legal, and conclude that "[a]t some point, society will be forced to acknowledge that this is really a discussion about what constitutes a tolerable level of disparate impact in employment."[185]

Like Barocas and Selbst, Pauline Kim's recent paper, *Data-Driven Discrimination at Work* also considers the possible influence of conscious or unconscious bias on data analytics operations.[186] Most revealing is her discussion of the possibility that "[e]ven without any deliberate intent, a model may be biased in the statistical sense. Choices in the coding of information, errors in the data, reliance on unrepresentative samples, or the selection of variables for exclusion or inclusion might produce a model that is inaccurate in a systematic way."[187] In response to these concerns, Kim's paper examines and rejects disparate impact theory as a means of addressing bias in the use of predictive analytics. Essential to her conclusion is the fact that the defense to disparate impact is a showing of "job relatedness and business necessity" but, as Kim points out, when using an algorithm to predict performance, "the claim that it is job related often reduces to the fact that there is an observed statistical correlation." And if that were sufficient, "the standard would be a tautology rather than a meaningful legal test."[188] In an effort to tackle this problem, Kim proposes a new Title VII-based claim—classification bias—under existing statutory language, "which forbids employer practices that 'classify' employees or applicants 'in any way which would deprive or tend to deprive' them of employment opportunities because of protected class characteristics."[189] She suggests that employers should bear the burden under such a claim of demonstrating (1) accuracy of the data and (2) that that data is substantively meaningful and not just statistically correlated.[190] Ultimately, Kim suggests that technological innovations and/or some independent regulatory approval process may be needed to address data-driven bias.

In terms of privacy concerns, scholars in this area have begun to explore the inadequacy of the existing legal and regulatory regime as well. In a recent article, Kate Crawford and Jason Schultz note the new and different ways in which the use of metadata in particular affects privacy concerns. "By primarily analyzing metadata, such as a set of predictive and aggregated findings, or by combining previously discrete data sets, Big Data approaches are not only able to manufacture novel PII [personally identifiable information], but often do so outside the purview of current privacy protections."[191] The authors examine the ways in which Big Data breaches traditional notions of privacy and the available statutory protections under the Electronic Communications Privacy Act of 1986, the Fair Credit Reporting Act, and the Video Privacy Protection Act of 1988.[192] Nonetheless, because of the nature of predictive analytics and the type of data used in these programs, some operations may avoid the reach of all of these laws.[193] In addition, traditional notions of privacy protection, which focus on data collection and

[184] *Id. See also id.* at 711.
[185] *Id.* at 728.
[186] Kim, *supra* note 9.
[187] *Id.* at 865.
[188] *Id.* at 920.
[189] *Id.* at 867 (quoting Civil Rights Act of 1964 § 703(a)(2), 42 U.S.C. § 2000e-2(a)(2).)).
[190] *Id.* at 917.
[191] Crawford & Schultz, *supra* note 9, at 94.
[192] *Id.* at 106-07.
[193] *Id.*

retention and rely on "notice-and-consent models" may not be effective in the Big Data context given its unpredictable nature. "[H]ow does one give notice and get consent for innumerable and perhaps even yet-to-be-determined queries that one might run that create 'personal data'? How does one provide . . . individual control, context, and accountability over such processes?"[194] In response, Crawford and Schultz propose creation of "procedural data due process," which would regulate the way in which entities use personal data as opposed to only regulating its collection or disclosure.[195]

These scholars all address problematic aspects of the use of Big Data. These concerns are significant and varied, from serious basic fairness concerns, to privacy intrusions, to the operation of bias in the models and their results. What the academic literature is missing, and what this Article contributes, is a consideration of the ways in which employers' reliance on off-duty can operate to the detriment of employers, employees, and the employment relationship. The collection of and reliance upon data that is created outside of the working environment, and that is increasingly available to employers, may eventually cause a complete breakdown in the concept of work and non-work spheres.

C. The New Problems Created by Off-Duty Data Use

The above-discussed scholarly critiques of employers' decision-making approaches reveal an assortment of problems. In addition to these concerns, the programs described in this Article that rely on off-duty data collection and analysis have essentially added two problematic elements to the existing reality—(1) the ability to gather and analyze massive amounts of off-duty data from thousands of employees in a way that is not immediately obvious or transparent to employees and (2) the ability to draw correlations between seemingly unrelated bits of off-duty data and predictions of workplace success.[196]

First, the incursion into an employee's off-duty time is no longer regularly apparent to the employee. This lack of meaningful transparency is a new and extremely troubling component of the data analytics revolution. When a lawyer takes a skype call for work from her living room, when a consultant uses his company laptop for personal internet shopping, when a pharmaceutical representative makes personal calls on her company cell phone while driving between sales calls, when a nurse uses her Facebook account to complain about hospital policies, allowing her co-worker Facebook friends to see that information—these workers are all aware, to some extent, that their employers have access to their personal information and make the choice to allow that incursion to make their lives easier and more convenient. In contrast, when an

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[194] *Id.* at 108.
[195] *Id.* at 109.
[196] *See* Peck, *supra* note 1 ("Erik Brynjolfsson, a professor at MIT's Sloane School of Management, . . . reminded me that we've witnessed this kind of transformation before in the history of management science. Near the turn of the 20th century, both Frederick Taylor and Henry Ford famously paced the factory floor with stopwatches, to improve worker efficiency. And at midcentury, there was that remarkable spread of data-driven assessment. But there's an obvious and important difference between then and now, Brynjolfsson said. 'The quantities of data that those earlier generations were working with,' he said, 'were infinitesimal compared to what's available now. There's been a real sea change in the past five years, where the quantities have just grown so large—petabytes, exabytes, zetta—that you start to be able to do things you never could before.'"). *See also* Bodie, et. al., *supra* note 9, at 987 ("Employers have always monitored employees to determine how they perform on the job. People analytics methods seek to capture masses of quantitative data to reveal hidden patterns that are correlated with employee success or failure.").

employer uses an employee's social media meta-data to create workplace teams, determine insurance rates, or find candidates for promotion, the small print buried in the employment contract that allows the employer to access that data is not at the forefront of the employee's mind. If he noticed the provision at all at the time of hire, it is likely gone from his consciousness by the time he is posting purely personal non-work-related information to share with his digital friends. The same is true for the employee who signs up for Castlight Health to streamline management of her co-pays and prescriptions and does not consider the data analytics possibilities that allow her employer to accurately predict her health concerns and family planning thoughts. Although an employee who agrees to wear a Fitbit to attain discounts on employer provided health insurance has signed a form alerting him that his data may be shared with third parties and his employer, this is likely not on his mind when wearing the device while having sex at home alone. And while employees may know that their picture is being taken when they enter the workplace, they undoubtedly will not realize that the picture is being used by a highly accurate computer program to detect their emotions and that this information is shared with the employer for numerous purposes. Incursions into the non-work sphere have become a regular feature of the modern workplace but the incursions made possible by data analytics are different. They are far less transparent and much less obviously related to the work of the employee and the goals of the employer.

Second, the fact that an algorithm can make connections between seemingly innocuous consumer preferences, hobbies, and interests and workplace success is a new and troubling feature. Employees generally believe they are being evaluated on the basis of at-work performance and possibly any off-duty conduct that negatively impacts on their employer's reputation or brand. Most workers, however, will likely chafe at the notion that their taste in beer, love of indie rock, and preference for the Washington Post along with thousands of other variables can be used to determine professional development opportunities, leadership potential, and future career success. Similarly, an employer's ability to correlate physiological data (on sleep patterns, heart rate and the like) and emotional states (from facial scans) with workplace success, and ultimately try to adjust their workers' off-duty behavior to maximize their at-work potential suggests a level of control that many workers will find distasteful at best. These differences—the quantity of information, lack of transparency, and lack of foreseeability—make the data-based incursions into workers' off-duty lives even more troubling.[197]

Finally, it is important here to note that the data analytics programs described above do not necessarily violate traditional privacy norms or implicate existing privacy protections, making the conversation about blurring of the work/non-work divide more important. As described above, for the most part, when employers implement a data analytics program, they typically obtain employee consent to collect the required data—whether it is social media meta-

[197] Even James Sonne, who has argued against the statutes that seek to prohibit employers from taking action against employees based on their off-duty behaviors, acknowledges that transparency or lack thereof should affect the assessment of the incursion into an employee's personal life. "Evidence extracted from the surveillance of an employee's home on a moral fishing expedition is quite distinct from disclosed or readily apparent facts." Sonne, *supra* note 90, at 138. *See also* Charles Craver, *Privacy Issues Affecting Employers, Employees, and Labor Organizations*, 66 LA. L. REV. 1057, 1057 (2006) ("Thirty years ago, I wrote an article which dealt in part with privacy questions arising in employment environments. I discussed the right of employers to search employees, their possessions, and their lockers. I explored employer monitoring of workers through direct supervisory observation and through the use of closed-circuit television cameras. I also examined the frequent administration of polygraph tests in employment settings. It is difficult to comprehend the employment environment changes and the technological developments that have occurred since the publication of that article.")

data, physiological data from a Fitbit, or health-related information from Castlight or facial scanning technology.[198] Scholars caution that "broad, vague, and undifferentiated consent" obtained at the beginning of the employment relationship may be challenged as unfair or even legally insufficient.[199] But, because consent of some kind is obtained, these programs do not necessarily violate traditional privacy norms.[200] In addition, as Crawford and Schultz explain, the use of predictive analytics involves the creation of potentially private information, not necessarily the collection of it, putting many of these programs outside of existing privacy protections.

> Oftentimes, the data that ends up being personally identifying may not yet exist during the most significant data transfers . . . Thus, unless one decides that privacy regulations must govern all data ever collected, processed, or disclosed, deciding where and when to draw lines around these activities becomes extremely difficult with respect to Big Data information practices.[201]

Existing regulations do not, as a result, bar much of what this article discusses from an invasion of privacy perspective.[202] Nonetheless, the lack of meaningful transparency coupled with the distasteful correlation between off-duty lives and predicted workplace success make these programs feel unfair, inappropriate, or as if they have crossed some unspoken line. This article seeks to locate those objections in the blurring of the work/non-work divide, positing that the discomfort that many feel with these programs is a result of employers' overreach into their workers' personal lives, regardless of the formal notice and consent provided. And, to the extent that workers and employers recognize the benefits of maintaining this divide, we as a society need to consider to what extent we want to regulate data analytics programs and the best means of doing that.

IV. OFF-DUTY DATA AND THE WORK/NON-WORK DIVIDE

Companies' new uses of data analytics to delve into employees' emotions, beliefs, non-work activities, and physiological traits and their reliance on that personal information to make

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[198] *See* supra Part II, A-D.

[199] Bodie, et. al., *supra* note 9, at 992.

[200] *See* Benjamin Zhu, *Note: A Traditional Tort For A Modern Threat: Applying Intrusion Upon Seclusion To Dataveillance Observations*, 89 N.Y.U.L. REV. 2381, 2396-2400, 2396 n.105 (2014) (noting that collection and disclosure of public information or private information with consent does not violate privacy norms or give rise to tort-based intrusion upon seclusion claims) (citing Johnson v. Stewart, 854 So. 2d 544, 549 (Ala. 2002) ("A wrongful-intrusion claim cannot be based upon information voluntarily given to the defendant by the plaintiffs.").

[201] Crawford & Schultz, *supra* note 9, at 106. *See also* Busse v. Motorola, Inc., 813 N.E.2d 1013 (Ill. App. Ct. 2004) (finding no intrusion upon seclusion when data collection was not private and failing to consider private nature of aggregated data and resulting predictions). *See also* Neil M. Richards & Daniel J. Solove, *Prosser's Privacy at 50: A Symposium on Privacy in the 21st Century: Article: Prosser's Privacy Law: A Mixed Legacy*, 98 CALIF. L. REV. 1887, 1919 (2010) ("As Julie Cohen aptly observed, "It is becoming increasingly clear that the common law invasion of privacy torts will not help to contain the destruction of informational privacy." . . . Much of the compilation of data occurs from information that is in the public domain, and courts have concluded that collecting such data is not an invasion into a person's 'solitude' or 'seclusion.'") (quoting Julie E. Cohen, *Privacy, Ideology, and Technology: A Response to Jeffrey Rosen*, 89 GEO. L.J. 2029, 2043 (2001)).

[202] *See* Crawford & Schultz, *supra* note 9, at 106-08.

employment decisions obviously raises all of the ethical and legal concerns considered by the scholars discussed above. But this foray into off-duty data raises an additional concern—the process of gathering and using massive quantities of non-work data to make work-related decisions has the effect of weakening the distinction between what is work and what is not. When an algorithm can use your off-duty life to accurately predict your workplace success, there is very little left to distinguish one from the other. It is this Article's contention that despite the financial benefits to employers who use data analytics in these ways, the new and more dramatic erosion of the distinction between work and non-work that results from these programs is ultimately detrimental to employees and employers alike.

A. Problems Inherent in Big Data's Erosion of the Work/Non-work Divide

The consequences of the blurring of the work/non-work divide are problematic for employees, employers, and society in general in both obvious and non-obvious ways. From the employee's perspective, any attempts at a separation of work and personal life to maintain physical and mental health will necessarily be hampered by the digitally driven erosion of that divide.[203] The ability to "turn off" work-related thoughts and decisions to focus on personal interests, family, and one's health become far more difficult if one's employer is constantly monitoring the employee's off-duty activities, emotions, and ruminations and relying on them to make workplace decisions. In addition, the loss of privacy and personal freedom is palpably troubling. The notion that everything one does in his personal time may be used to make workplace decisions means the employer is always, to some extent, in control. This will eventually impact how individuals behave, restricting their speech, activities, and even thoughts. If a worker eventually understands that her boss is using seemingly unrelated aspects of her personal life to predict her workplace success, she should and will begin to adjust her consumer preferences, off-duty activities, and personal beliefs to match what her employer deems to be a recipe for success. As a society, we should be concerned about the detrimental impact this may have on autonomous thought, engagement in public life, and even market participation. Employers should also be concerned about the erosion of employee autonomy and its impact on motivation, creativity, morale, and ultimately on retention and productivity.[204]

Although less obvious, employers too should be concerned about the ways in which the erosion of the work/non-work divide will impact the concept of a "scope of employment" and employer attempts to avoid liability for workers' actions. The concept of the "scope of employment" refers to the "zone of conduct in which the employee is performing her job duties."[205] However, that "zone of conduct" can include the "zone of activity *related to* employment duties," making the employer liable for an employee tort even if the action itself is technically "outside of the employee's duties or authority."[206]

A 1928 opinion from a Connecticut court recognized the troublesome nature of job relatedness, construing the doctrine of *respondeat superior* to include a broad swath of employee activity. In *Ackerson v. Erwin M. Jennings Co.*,[207] the court considered a case in which an auto

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[203] *See supra* text accompanying notes 55-58 (describing benefits to employees of work-life balance).
[204] *See supra* text accompanying notes 67 - 74 (discussing impact of autonomy on innovation and employee well-being).
[205] Bodie, *supra* note 44, at 692.
[206] *Id.* (italics added).
[207] 107 Conn. 393 (Sup. Ct. Err. 1928).

sales agency invited employees out to a dinner in appreciation of their services to the company.[208] One of the managers drove the other employees in a company car and, on the way back from the dinner, crashed, killing one passenger and seriously injuring another.[209] Despite the fact that the dinner was meant as a purely enjoyable outing to show appreciation for the workers, the court rejected the lower court's directed verdict for the company.[210] "[T]he jury might reasonably have found that the occasion was intended principally if not solely to promote legitimate and important interests of the defendant's business, viz., harmony, co-operation, and good will among the employees" and was therefore within the scope of employment.[211] As early as 1928, long before the majority of employees used company-issued cell phones and computers, before employees regularly worked from home and on nights and weekends, and before technology made it possible to track employees' conduct, emotions, and thoughts while off-duty, the *Ackerson* court understood that once a personal activity has some tangible connection to the employer's goals, it can become job-related such that employer liability may attach to the activities of those employees engaged in it.[212]

In addition to the concept of job relatedness, courts have also focused on foreseeability as a means of determining the boundaries of the "scope of employment." Courts have "adopted something along the lines of a foreseeability test, in which the employer is liable if the employee's actions are in some way foreseeable."[213] In describing this conception of the doctrine, Matthew Bodie points to opinions by Judges Hand and Friendly in which the courts concluded that the employer (the Government in those cases) was liable for the acts of violence to people and property perpetrated by drunken sailors.[214] Judge Friendly made clear that the sailor's "conduct was not so 'unforeseeable' as to make it unfair to charge the Government with responsibility" further noting that "the proclivity of seamen to find solace for solitude by copious resort to the bottle while ashore has been noted in opinions too numerous to warrant citation. Once all this is granted, it is immaterial that [the sailor's] precise action was not to be foreseen."[215] In reaching these conclusions, Bodie observes that courts are concerned not with "whether the particular employee is following the script of her particular contractual relationship with the employer, but rather whether the activity is part and parcel of the overall employment relationship."[216]

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[208] *Id.* at 396.
[209] *Id.* at 394, 398.
[210] *Id.* at 399.
[211] *Id.* at 397.
[212] In addition to liability through respondeat superior, foreseeability of behavior also impacts employer liability for direct negligence under negligent retention and negligent supervision theories. Once an employer "knew or should have known" of an employee's proclivities, possible dangerous nature, habits or other characteristics, it may be liable for negligently maintaining that employee on staff or failing to adequately supervise the employee thus leading liability for the employee's tortious actions harming others. *See, e.g.* Beneke v. Accent Signage Sys., No. 27-CV-13-2275, 2013 Minn. Dist. LEXIS 78 (Minn. Dist. Ct. July 2, 2013) (allowing for possible employer liability for workplace shooting when employer should have known of employee's proclivity toward violence). *See also* Jessica Brown, *Employee Blogging: What Employers Don't Know Could Hurt Them*, 11 L. Firm P'ship & Benefits Rep. 1, 506 (Dec. 2005) (observing that employers can be held directly liable for employee blogging through negligent hiring and negligent supervision of an employee or negligent protection of confidential information, or indirectly liable through *respondeat superior*).
[213] *Id.* at 693.
[214] *Id.* (citing Ira S. Bushey & Sons, Inc. v. United States, 398 F.2d 167 (2d Cir. 1968) (Friendly, J.); Nelson v. Am.-West African Line, 86 F.2d 730 (2d Cir. 1936) (Hand, J.)).
[215] *Bushey & Sons*, 398 F.2d at 172.
[216] Bodie, *supra* note 44, at 694.

Given these longstanding approaches to liability and the employment relationship, it is not difficult to see how the "scope of employment" and related negligence doctrines might be expanded to incorporate all those activities that employees engage in on their off-duty time but which the employer uses to make work-related determinations. If an employer, using Project Comet, relies on employees' off-duty hobbies, consumer preferences, risky behaviors, and personal communications in an effort to find candidates for promotion or determine insurance rates, an employee may eventually successfully argue that the employer should be responsible for that employee's tortious off-duty activities as well. [217] They are no less "job related" than a celebratory outing to build employee morale. And a court considering foreseeability may soon conclude that if an employer can detect and rely upon an employee's personal, unexpressed health concerns or on the employee's physiological characteristics, the employer should be liable for making demands on the employee that it knew or should have known would exacerbate a health concern or hasten an illness. Likewise, if the employer regularly identifies and aims to "fix" the emotions of its employees, it will likely be liable for an employee's violent outburst at work that harms other employees since it was foreseeable based on the data the employer actively analyzed and used. [218] These suggestions may seem like a stretch but it is clear that the use of off-duty data and its massive erosion of any divide between work and non-work spheres has at the very least, made the slope far more slippery.

B. Society's Consideration of Off-Duty Data Use and Possible Ways Forward

Despite the negative effects of off-duty data gathering and use, employers are increasingly implementing these programs in their workplaces. This trend may be a result of the relatively low cost and ease of implementation along with the tempting nature of the quantity and breadth of available data. It is clear that employers do not generally recognize or appreciate the detrimental impacts these programs may have on their workplaces. And while employees may immediately feel a sense of discomfort or fear upon understanding the programs, they have little power to contest them. What should be clear, however, is that employers, employees, and

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[217] *See generally* Mark Ishman, Comment, *Computer Crimes and the Respondeat Superior Doctrine: Employers Beware*, 6 B.U. J. SCI. & TECH. L. 115, 122 (2000) (analyzing the "current trend of the courts" in "expand[ing] the situations when an employer may be liable for the wrongful and illegal acts of its employees" and its implications for computer-related activity). *See also* Blakely v. Cont'l Airlines, Inc., 751 A.2d 538, 542-43, 552 (N.J. 2000) (finding that an Internet medium similar to a blog - an electronic bulletin board - can be an extension of the workplace and that the employer may be liable for a pattern of harassing statements on it made by employees against co-workers); John S. Hong, *Can Blogging and Employment Co-Exist?*, 41 U.S.F. L. REV. 445, 455 (2007) (asserting that employer concerns about vicarious liability stem from the belief that employees often do not realize the ability of blogs to reach millions of readers).

[218] *See* Lane, *supra* note 161, at 186-88 (discussing the "subtle trap lurking for employers in the use of the impressive new surveillance technologies"—since foreseeability is central to employer liability under *respondeat superior*, if employers have more information, this may increase the employer's liability). *See also* Beneke v. Accent Signage Sys., No. 27-CV-13-2275, 2013 Minn. Dist. LEXIS 78 (Minn. Dist. Ct. July 2, 2013) (allowing for possible employer liability for workplace shooting when employer should have known of employee's proclivity toward violence). *See also* Jessica Brown, *Employee Blogging: What Employers Don't Know Could Hurt Them*, 11 L. Firm P'ship & Benefits Rep. 1, 506 (Dec. 2005) (observing that employers can be held directly liable for employee blogging through negligent hiring and negligent supervision of an employee or negligent protection of confidential information, or indirectly liable through *respondeat superior*).

society as a whole should take the time to consider the long-term implications of allowing these data analytics programs to grow in use and scope and contemplate if and how we should limit or restrict their use.

In arguing that off-duty data analytics programs erode the work/non-work divide, I am cognizant of the fact that some critics may not be bothered by this or may, at the most, view it as a necessary evil. The values of privacy, personal autonomy, fairness and transparency are not equally prized by all and other values such as convenience and flexibility might reasonably be seen as outweighing some of these. In addition, as technology changes our lives so does our willingness to accept incursions into formerly sacrosanct areas, and the goal posts may be continually moving on conceptions of privacy and autonomy.[219]

As a society, however, we need to consider whether the divide between work and non-work spheres is a societal good that should be protected and to what extent. I have presented the benefits of this divide to employers and employees, but my goal in making this argument is not necessarily, at this stage, to propose legal prohibitions on the use of off-duty data programs or to suggest that employers immediately end their development. Rather, my aim is to force us to consider the implications of allowing these programs to grow and develop and to make conscious choices about their proliferation when they are in their early stages. Depending on how the majority of Americans view the erosion of the work/non-work divide, there are three primary approaches that we can, as a society, undertake in response: (1) allow their growth, relying perhaps on the market to correct severe overreaches, (2) statutorily restrict employers' access to off-duty data, or (3) find some middle ground including transparency requirements and meaningful consent.

First, it is possible to imagine a majority concluding that data analytics programs offer irresistible benefits: that the ability to create teams or determine potential leaders from social media meta data is a net positive for employers and employees; that the creation of more efficient, productive workplaces outweighs concerns about work-life balance and loss of autonomy; and that data analytics simply represents a faster and better way to find out information about employees that managers could have gleaned by paying closer attention to their workers. Employers may recognize the greater erosion of the work/non-work divide but believe that the benefits of these data gathering programs outweigh the potential expansion of liability under the "scope of employment" and financial and other human capital losses. And employees may view the erosion of the divide as problematic but see the demise of this divide as inevitable given their desire for greater flexibility and convenience through technology, non-traditional jobs, and the like.[220] In this case, we may decide to simply leave this situation alone, allowing off-duty data gathering programs to grow, aware of and accepting their problems.

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[219] *Id.* at 185 ("There is a persistent tension between 'privacy'—our innate desire to control the information that is known about us—and 'convenience'—our equally innate desire for daily life to be a little easier."). *See also* Evan Osnos, *Can Mark Zuckerberg Fix Facebook Before It Breaks Democracy?* NEW YORKER, September 17, 2018 (noting that in 2010, Facebook Founder Mark Zuckerberg said that "privacy was no longer a 'social norm.'").

[220] Sonne makes a similar argument with respect to "lifestyle discrimination" statutes that prohibit employer's reliance on lawful off-duty activities, arguing that "in a world where employees increasingly demand that their employers provide them non-work- related benefits such as health care coverage or life insurance, the implicit invitation into the private lives of employees and their beneficiaries is undeniable." Sonne, *supra* note 90, at 137. While I disagree with the basic premise of this argument—the request for benefits, the cost of which are shared by employer and employee, in exchange for the employee's labor, does not necessarily invite the employer to examine its employees' non-work-related lives, I nonetheless acknowledge that some employees may prize flexibility and convenience above all else.

Similarly, as James Sonne argues with respect to "lifestyle discrimination laws," it may be preferable to allow market forces to push employers to limit use of off-duty data in order to remain competitive in talent recruitment and retention. Sonne contends that "employer discretion-with market pressures, not law, as the counterweight for error-is a reasonable option that maximizes the business goals of employers while enhancing the flexibility and benefits of employees."[221] In other words, we should rely on employees' freedom "to choose a different employer or exert other labor or market pressures" and to "assess the relative values in their lives in exchanging their labor for an employer's capital."[222]

In fact, a combination of market forces and changing cultural values appears to have put an end to a similar program in our country's history. In 1914, Henry Ford, in an attempt to retain more workers in his factories, decided to double his employees' pay to five dollars per hour.[223] With this offer, however, came a number of requirements: "To qualify for his doubled salary, the worker had to be thrifty and continent. He had to keep his home neat and his children healthy, and, if he were below the age of twenty-two, to be married."[224] To enforce these requirements, Ford created an army of investigators (later known as "advisors") in a newly created Ford Sociological Department[225] who made unannounced visits to employees' homes to evaluate their cleanliness, observe the behavior of their children, and question employees about "spending habits, . . . alcohol consumption, [and] marital relationships. They'd ask what you were buying, and they'd check on your children to make sure they were in school." Eventually, this paternalistic approach to employees became both overly expensive for the company and culturally unacceptable and was phased out. "The $5 a day wage eventually turned out to be enormously expensive for Ford, as well as the cost of all those on-staff lawyers, doctors, investigators, and everybody else who were there just to support a productive workforce."[226] Even Henry Ford ultimately acknowledged the unsavory aspects of the program, writing in 1922: "[P]aternalism has no place in industry. Welfare work that consists in prying into employees' private concerns is out of date."[227] The use of off-duty data analytics programs may fare similarly under market forces. With greater publicity may come employee outrage and general cultural condemnation. Or, in contrast to Ford's program, employees may be willing to accept incursions into their personal lives which, unlike Ford's, are not based on a moralistic approach to controlling their behavior but rather on the notion that off-duty behavior, thoughts, and emotions can predict workplace success. Regardless, market forces may be an appropriate means of responding to these new technologies.

Second, it is possible to imagine the opposite response: employees may be enraged by the use of off-duty data gathering programs and seek legal responses to prohibit them, and employers may likewise recognize the financial and legal downsides. While market forces may eventually end such programs, financial disincentives to their use take significant time to come to light making legislative action preferable. In this scenario, federal (or state) legislation to regulate which data employers can access and how they can use it may be the solution. Any such legislation would, by necessity, require transparency on the part of employers, mandating

[221] Sonne, *supra* note 90, at 183-84.
[222] *Id.* at 155.
[223] Michael Ballaban, *When Henry Ford's Benevolent Secret Police Ruled His Workers*, JALOPNIC (March 23, 2014 1:35 PM), https://jalopnik.com/when-henry-fords-benevolent-secret-police-ruled-his-wo-1549625731.
[224] *Id.*
[225] Some sources referred to it as the Sociology Department. *Id.*
[226] *Id.*
[227] *Id.*

that employees be told in clear language the type of data the employer is gathering and exactly how it will be used in workplace decisions.[228] Statutes to limit the use of off-duty data might be modeled on state off-duty conduct laws, particularly those in North Dakota, New York, California, and Colorado, which provide general protection for employees who engage in lawful off-duty activities.[229]

A new state or federal statute could be modeled on the broad "lawful activities" statutes but contain language specifically prohibiting adverse employment decisions based on data that reveals an employee's off-duty emotions, health concerns, thoughts, consumer preferences, political views, and physiological markers. In addition, a new law could provide employees with a private right of action or an administrative mechanism to challenge uses of data that are prohibited by the new law.[230] Like the existing statutes, there may need to be exceptions built into the law, but these exceptions would need to be far more specific than the current "business-related interests of the employer"-style exception, which is so broad and vague as to include anything that arguably benefits the employer. A new statute might exempt from coverage the use of off-duty data that will have a substantially negative impact on the employer's brand or public reputation or on its ability to perform its essential operations.

Finally, there may be some middle ground between these two extreme reactions to off-duty data programs. It may be that the population is split in its views on these programs with some being horrified while others view off-duty data collection as effective and barely objectionable. My unscientific, purely anecdotal surveys of friends and colleagues suggests that this split view is the likeliest scenario. If this, in fact, is the case, regulation may be needed but only to mandate disclosure of the use of off-duty data and allow for meaningful consent by employees. An "opt-in" or "opt-out" approach with retaliation protections for those who "opt-out" could offer the needed safeguards for those who object while allowing employers to

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[228] The Fair Credit Reporting Act (FCRA) may serve as a model in requiring transparency when making adverse employment decisions. 15 U.S.C. §§ 1681-1681t (2018). "Under the FCRA, an employer who intends to deny employment to an applicant based in whole or in part on information in a credit report must first disclose that fact to the applicant in a pre-adverse action notice that includes a copy of the credit report. The goal of the adverse action requirement is to provide job candidates with an opportunity to correct any consequential errors in the report. . . ." Lea Shepard, *Toward a Stronger Financial History Antidiscrimination Norm*, 53 B.C. L. REV. 1695, 1724 (2012). A similar approach could be mandated when employers utilize off-duty data to make an adverse or any employment decision.

[229] *See http://www.ncsl.org/documents/employ/off-dutyconductdiscrimination.pdf*. *See also* Sonne, supra note 90, at 170-72. While employees may attempt to rely on existing off-duty conduct laws to attack off-duty data analytics programs, they are unlikely to succeed given the statutory language in those laws, some of which exempt activity that "creates a material conflict of interest related to the employer's trade secrets, proprietary information or other proprietary or business interest." N.Y. Lab. Law 201-d(2)(b)-(d), 201-d(3)(a) (2018). In addition, these statutes specifically pertain to employees' "lawful conduct", Cal. Lab. Code § 96 (2018), or "lawful activities," N.D. Cent. Code, § 14-02.4-01 (2017), terms that may inhibit their usefulness in the data analytics context. Given courts' proclivity for narrowly interpreting these seemingly broad statutes, it is likely that courts would view an employee's contemplation of pregnancy, preference for Sam Adams beer, and depressed emotional state as falling outside of these terms. *See* Pagnattaro**,** *supra* note 171, at 654-55, 660-62 (discussing narrow court interpretations of these laws). Thoughts, emotions, preferences, and proclivities which can be identified by data analytics may not be traditional "conduct" or "activities" as originally conceived by these statutes.

[230] *See* Nicholas Confessore, *The Unlikely Activists Who Took On Silicon Valley — and Won*, N.Y. TIMES MAG., Aug. 14, 2018, https://www.nytimes.com/2018/08/14/magazine/facebook-google-privacy-data.html (discussing the fact that businesses were more willing to support a privacy law that vested the right to bring a claim in a government agency or official rather than a private right of action akin to the civil rights laws). There are downsides to administrative mechanisms in terms of employee power and the fact that administrative penalties may be seen as merely a "cost of doing business" that will be expected and easily absorbed.

continue to develop these programs using a portion of their employees' data. In fact, computer scientists and others are already beginning to design data-gathering programs with informed consent built into the design itself.[231] Given the European Union's General Data Protection Regulation's (GDRP) applicability to many U.S. corporations and its requirements for disclosure and "unambiguous" consent by "clear affirmative action," this middle ground approach may soon seem familiar and thus acceptable to many employers.[232]

Where the majority of American society will come down on these questions remains to be seen. What is abundantly clear now is the importance of considering the benefits and downsides of big data in the workplace including long term implications for the way in which our laws and culture conceive of work and non-work spheres. Whether we, as a society, decide to allow market forces to dictate acceptable employer behavior, choose to regulate and restrict the use of off-duty data for adverse employment decisions, or find some middle ground that requires disclosure and consent, we should be choosing a course rather than allowing the technological innovations to be the guide. The ability to access and effectively use data should not determine what we allow.

CONCLUSION

With the enactment of the European Union's General Data Protection Regulation,[233] the Cambridge Analytica scandal,[234] and Facebook's Mark Zuckerberg's testimony before the Senate,[235] the notion of data privacy and companies' ability to monitor and use our most personal information is ever-present. While the focus has been on mega companies' access to and manipulation of consumer data, employers of all sizes have been participating in this data revolution as well with varying implications for workers.

Data analytics technology uses algorithms to capture, analyze, and categorize massive quantities of data that the human brain, on its own, cannot make sense of. This technological revolution offers tremendous benefits to employers including the ability to track and explore the work and personal lives of their employees. Nonetheless, this new technology has significant downsides. Scholars in the past have critiqued employers' use of off-duty conduct to make adverse employment decisions. More recently, a number of scholars have begun to tackle the ethical and legal concerns that arise when big data is employed to make hiring decisions and to track employee productivity at work. This Article has contributed to the dialogue by considering the way in which data analytics allows employers to go beyond workplace data and gather and use information on employees' personal lives. In addition to the privacy concerns and opportunity for bias to infect workplace decisions based on big data, this article demonstrates that data analytics has the potential to dramatically alter and erode the division between work

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[231] *See, e.g.*, Batya Friedman, et. al., *Informed Consent by Design*, *in* DESIGNING SECURE SYSTEMS THAT PEOPLE CAN USE 495 (L. Cranor and S. Garfinkel eds., 2005).
[232] *See* General Data Protection Regulation (EU) 2016/679. *See also* Adam Satariano, *G.D.P.R., a New Privacy Law, Makes Europe World's Leading Tech Watchdog*, N.Y. TIMES, May 24, 2018, https://www.nytimes.com/2018/05/24/technology/europe-gdpr-privacy.html.
[233] *See* Satariano, *supra* note 135.
[234] *See* Nicholas Confessore, *Cambridge Analytica and Facebook: The Scandal and the Fallout So Far*, N.Y. TIMES, April 4, 2018, https://www.nytimes.com/2018/04/04/us/politics/cambridge-analytica-scandal-fallout.html.
[235] *See Mark Zuckerberg Testimony: Senators Question Facebook's Commitment to Privacy*, N.Y. TIMES, April 10, 2018, https://www.nytimes.com/2018/04/10/us/politics/mark-zuckerberg-testimony.html.

and non-work spheres, a division that is important to employee well-being but also to employers' bottom lines and exposure to legal liability.

While this process of erosion is already underway, fueled by new technologies, new "sharing economy" positions, and workers' increasing desire for flexibility and convenience, data analytics programs will dramatically exacerbate the existing reality. When companies mine social media meta data to create workplace teams, predict successful leaders, or make promotion decisions, the line between work and non-work spheres begins to disappear. When employers can track employees' heart rate and sleep quality, determine who is contemplating pregnancy, identify an employee's emotional state from a facial scan, and use all of this information to make workplace decisions, there is no real division between what is work and what is not. This increased erosion of the work/non-work divide brings problems for employees and employers alike including negative health effects, decreased productivity, financial losses, and increased legal liability. As a society, we must decide whether the divide between work and non-work spheres is a societal good that should be protected and to what extent. Regardless of where Americans come down on this question, we should be actively choosing a course rather than mindlessly submitting to the technology's appeal. Just because we can doesn't mean we should.