

## Policing Work Boundaries on the Cloud

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**ABSTRACT.** The widespread use of Software as a Service (SaaS) applications like Slack, Workplace, and Teams highlights an important shift in how work is conceptualized and performed in the digital age. Cloud computing, the technology on which these enterprise applications are based, blurs work boundaries due to its capacity to free work from spatial and time constraints. Because labor laws are predicated on a strict dichotomy between work and nonwork, cloud computing can render them inapt. This Essay expands on the ways in which the reality of work performance with SaaS applications deviates from the legal foundations of work regulation. It also explores certain possibilities for reconciling round-the-clock use of such applications with the existing labor law regime. In doing so, this Essay argues that application designers can play a central role in ensuring the continued relevance and enforcement of labor regulations in digital environments. Relying on arguments for regulation by code, I propose a regulatory scheme that encourages providers of enterprise SaaS applications to incorporate features for tracking and displaying usage time alongside the capacity to block worker access during predetermined time windows or after certain hours of activity.

### INTRODUCTION

Cloud computing facilitates access to shared, configurable computing resources, which can be rapidly disseminated with marginal management or interaction with service providers.<sup>1</sup> One critical feature of cloud computing is broad network access, which enables users to gain on-demand connectivity to computing resources from various devices. While easy access to cloud compu-

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1. *NIST Cloud Computing Program - NCCP*, NAT'L INST. OF STANDARDS AND TECH., <http://www.nist.gov/programs-projects/nist-cloud-computing-program-nccp> [<http://perma.cc/M34Q-AZBL>].

ting may be a selling point for companies, it also risks creating what one scholar has described as “a 24/7 environment.”<sup>2</sup> These environments are problematic because they normalize nonstop work without disclosing the cost to society.

Cloud computing thus helps create a phenomenon in which time continuously runs, without clear demarcations for work or other activities.<sup>3</sup> Demarcations of time, however, are important to the subject of work boundaries and has implications for the current labor law regime. Scholars have examined these boundaries from various perspectives, some focusing on technology-mediated forms of work performance or communication and others on practices that do not necessarily implicate the use of digital media or cloud technologies. While their approaches and areas of focus vary, these scholars each focus on the porosity of work boundaries. Zachary Kramer, for instance, examines how the effects of discrimination at work flow into nonwork, a process he describes as “exporting.”<sup>4</sup> Arlie Hochschild has investigated the conflation of work and home, though she has not considered how digital media is used in the performance of work.<sup>5</sup> Still others focus squarely on the technology-mediated intrusion of work into other spheres, a phenomenon they call “presence bleed,” that emphasizes work performance regardless of time and location.<sup>6</sup> By blurring the boundaries between personal and professional identities, presence bleed leads to overwork. It is similar to the “autonomy paradox”<sup>7</sup> that results from workers’ ability to access work anywhere and anytime using mobile technologies. This Essay focuses on another consequence of blurred work boundaries: the implications for labor law, especially regarding overtime rules.

Labor law seeks to define the temporal boundaries of work via a regulatory framework that recognizes and enforces forty-hour work weeks<sup>8</sup> and overtime rules. The current scheme emerged during the New Deal era to resolve longstanding contentions between employers and workers over the conception of worktime.<sup>9</sup> Labor law, however, must continue to adapt to emerging workplace trends or risk becoming outdated. As Kate Andrias observes, labor law

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2. JONATHAN CRARY, *LATE CAPITALISM AND THE ENDS OF SLEEP* 20-21 (2013).

3. *Id.* at 47.

4. See Zachary A. Kramer, *After Work*, 95 CAL. L. REV. 627, 628 (2007).

5. See ARLIE RUSSELL HOCHSCHILD, *THE TIME BIND: WHEN WORK BECOMES HOME AND HOME BECOMES WORK* (1997).

6. MELISSA GREGG, *WORK’S INTIMACY* (2011).

7. Melissa Mazmanian et al., *The Autonomy Paradox: The Implications of Mobile Email Devices for Knowledge Professionals*, ORG. SCI., Sept.-Oct. 2013, at 24.

8. 29 U.S.C. § 207 (2012).

9. HARRY BRAVERMAN, *LABOR AND MONOPOLY CAPITAL: THE DEGRADATION OF WORK IN THE TWENTIETH CENTURY* (1998).

can be “rendered inapt by contemporary managerial strategies” if it “fails to provide tools capable of redressing today’s inequities.”<sup>10</sup> Cloud technologies threaten the current framework by allowing work to transcend spatial and time constraints in new and unanticipated ways. This Essay aims to highlight how cloud technologies, particularly SaaS applications like Slack, Workplace, and Teams, challenge labor law’s regulation of work boundaries. The Essay also identifies potential methods for bringing the performance of work on these applications within the regulatory scope of existing labor regulation.

Regulating work boundaries on digital media has three important policy ends. First, when the boundaries of work are fluid, workers can be exploited by extracting more work than would ordinarily be performed within strict time boundaries, leading to lost wages. The risk, however, is not one-sided. Employers also risk losing valuable labor time since employees can access nonwork activities during work hours. Second, there is the need to prevent overwork. Research indicates that overwork leads to health problems and sleep deprivation, which in turn pose threats to public safety.<sup>11</sup> In some extreme cases, it can lead to death, a phenomenon described by the Japanese as *karoshi*.<sup>12</sup> Lastly, the movement toward cloud-based work environments allows, and perhaps even incentivizes, employers to skirt overtime regulations, thereby reducing the effectiveness of labor regulations in the digital age.

This Essay proceeds in three Parts. Part I provides historical context regarding the connections among labor, time, and technology. It summarizes major shifts in the construction of work over three major time periods and situates digital labor within this broader labor history. Part II delves into examples of the SaaS applications under consideration in this Essay and discusses how these applications pose challenges to the existing labor law framework. Part III concludes by highlighting the challenges of maintaining law-based dichotomies between work time and nonwork time in the digital age, acknowledging attempts by other countries, like France, to establish firm work boundaries.

## I. LABOR, TECHNOLOGY, AND TIME

Technology and time measurement have long been relevant to the development of labor regulation. Independent peasants and craftsmen in the preindustrial period recorded a task-focused approach to work: extending or con-

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10. Kate Andrias, *The New Labor Law*, 126 YALE L.J. 2, 7 (2016).

11. Helene Jorgensen & Lonnie Golden, *Time After Time: Mandatory Overtime in the U.S. Economy*, ECON. POL’Y INST. (Jan. 2002), [http://www.epi.org/publication/briefingpapers\\_bp120](http://www.epi.org/publication/briefingpapers_bp120) [<http://perma.cc/ZDP5-FQ79>].

12. *Id.*

tracting the work day based on the task being performed.<sup>13</sup> With the rise of employment in artisan shops and factories, workplaces shifted to a time-based approach, as reflected in contemporaneous debates regarding the length of the workday.<sup>14</sup> Despite the passage of laws regulating work hours in the 1930s, today's use of new media technologies allows for the mobility of workloads, making it possible for workers in the information age to retain a task-based approach.<sup>15</sup> This Part briefly shows how distinct technologies and conceptions of time have shaped the regulation of work boundaries from the preindustrial period until present.

The law governing temporal work boundaries evolved from the social construction of work over time.<sup>16</sup> Prior to the rise of industrial work, labor was situated in an agrarian context that organized work by task rather than time. In this preindustrial context, concepts such as overtime did not apply.<sup>17</sup> As the nature of work evolved, however, applying time-measurement to work became necessary to demarcate employers' time from workers' time. Scientific management exemplifies the application of time measurement to work. Its proponent, industrial engineer Frederick Winslow Taylor, made fast work pace the center of his management plan for improving companies' efficiency.<sup>18</sup> Taylor was convinced that workers could work faster if managers eliminated the exercise of worker initiative in the performance of work. He suggested that the task of planning work and the specification of time limits ought to be within the exclusive purview of management, leaving workers only the duty of execution. Taylor's ideas were immensely influential. By the early twentieth century, industrial work had been transformed by scientific management. As the nature of work shifted, work hours and overtime became central labor rights issues, and a growing number of labor strikes demanded reduced work hours.<sup>19</sup> Although workers initiated these demands, firms like Kellogg's and Remington Rand eventually joined the push for work limits, motivated by the need to save jobs

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13. E. P. Thompson, *Time, Work-Discipline, and Industrial Capitalism*, 38 PAST & PRESENT 56, 60 (1967).

14. See BENJAMIN KLINE HUNNICUTT, *KELLOGG'S SIX-HOUR DAY* 32 (1996); DAVID R. ROEDIGER & PHILIP S. FONER, *OUR OWN TIME: A HISTORY OF AMERICAN LABOR AND THE WORKING DAY* 2, 33 (1989); THOMAS Dublin, *Women, Work, and Protest in the Early Lowell Mills: "The Oppressing Hand of Avarice Would Enslave Us"*, 16 LAB. HIST. 99 (1975).

15. GREGG, *supra* note 6; Mazmanian et al., *supra* note 7.

16. Paul V. Martorana & Paul M. Hirsch, *The Social Construction of "Overtime,"* in 10 RESEARCH IN THE SOCIOLOGY OF WORK 165-187 (Steven Vallas ed., 2001).

17. E. P. Thompson, *supra* note 13.

18. See FREDERICK WINSLOW TAYLOR, *THE PRINCIPLES OF SCIENTIFIC MANAGEMENT* (1911).

19. See Dublin, *supra* note 14.

and by research that associated reduced work hours with increased productivity.<sup>20</sup>

Increased public interest in leisure also contributed to the push for regulating work hours. Nonetheless, national regulation was introduced only in response to the high unemployment levels of the Great Depression. New Deal-era Keynesian economists posited that a cap on the maximum number of weekly work hours, alongside the imposition of premium wages for work hours exceeding the maximum, would reduce unemployment.<sup>21</sup> Accordingly, Congress passed the Fair Labor Standards Act (FLSA), limiting the work week to forty-four hours in 1938 and forty hours in 1940.<sup>22</sup> The Department of Labor's Overtime Rules under the FLSA underscore the importance of defining the scope of "work." The rules require that employees receive no less than one and half times their regular rate for hours worked over forty in a work week,<sup>23</sup> although some employees are exempt based on their duties and salary levels.<sup>24</sup>

The overtime rules are moderated by a *de minimis* rule under which certain amounts of work are considered insignificant and therefore ineligible for compensation.<sup>25</sup> Such work boundaries define what work qualifies for overtime pay, and what work is too negligible to receive remuneration. Not only does the FLSA distinguish between compensable and noncompensable work for purposes of overtime, it also enunciates the divide between blue collar and white collar workers, since the former are generally eligible and the latter are typically exempt.

Although the FLSA's exempt/nonexempt dichotomy perpetuates worker hierarchies, the applicability of the FLSA is more nuanced than the simple distinction between blue collar and white collar workers. Nevertheless, there is a level of pedigree associated with exempt employees such that some workers prefer to be classified as exempt despite having to forego overtime pay.<sup>26</sup> The logic for exempting certain employees from the overtime requirements of the

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20. HUNNICUTT, *supra* note 14, at 32.

21. Martorana & Hirsch, *supra* note 16.

22. Fair Labor Standards Act of 1938, 29 U.S.C. §§ 201-219 (2012).

23. *Id.*

24. These employees, described as executive, administrative, professional, outside sales, and computer employees, were required to be paid at least \$455 a week (\$23,660 per annum). *Id.* at § 213(a)(1). In 2016, the Department of Labor issued a final rule, raising the salary requirement to \$913 per week (\$47,476 per annum). 29 C.F.R. § 541 (2017).

25. 29 C.F.R. § 785.47 (2017).

26. Martorana & Hirsch, *supra* note 16.

FLSA is based on the presumption of higher relatively fixed pay and autonomy accruing to these exempt professionals.<sup>27</sup>

Employee classification and the development of labor regulation both depend on the definition of work, yet the FLSA does not provide a definition of work. As such, this Essay adopts the definition offered by the Supreme Court, while acknowledging the broader scholarly debate on the subject.<sup>28</sup> The Supreme Court defines work as “physical or mental exertion (whether burdensome or not) controlled or required by the employer and pursued necessarily and primarily for the benefit of the employer and his business.”<sup>29</sup> In addition to this broad definition, the Portal to Portal Act of 1947, an amendment to the FLSA, exempts from compensable working time “activities which are preliminary or postliminary” to the performance of the principal activities that an employee is supposed to perform.<sup>30</sup> Principal activities, in turn, are defined as “integral and indispensable.”<sup>31</sup> As such, for an activity to be compensable under the FLSA, it must be one that cannot be dispensed with if employees are to perform their principal activities. For example, changing clothes and showering by workers whose job at a battery manufacturing plant brought them into contact with toxic materials were considered compensable activities under the FLSA.<sup>32</sup> Meanwhile, security screenings undergone by warehouse workers to prevent theft were considered noncompensable.<sup>33</sup> The Supreme Court reasoned that in the case of the workers in contact with toxic materials, showering and changing clothes were integral to their principal activity in the plant. In the latter case, however, the screenings for theft were not integral to the workers’ primary function of retrieving items from warehouse shelves.

This discussion highlights the importance of technology and time measurement in the development of labor regulation, as well as the significance of how work is defined. Notably, the law does not acknowledge the evolution of work from one largely situated in physical space to one capable of being performed as a virtual activity. Nor does the definition of work expressly mention the use of new media technologies; specific cases involving the use of these

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27. *Id.*

28. The social and historical context of scholars’ work influence their definitions of work. See CHRISTIAN FUCHS, *DIGITAL LABOUR AND KARL MARX* (2014) (focusing on digital work); GREGG, *supra* note 6 (focusing on knowledge work); and HOCHSCHILD, *supra* note 5 (focusing on emotional work).

29. *Tennessee Coal, Iron & R.R. v. Muscoda Local No. 123*, 321 U.S. 590, 598 (1944).

30. Portal to Portal Act of 1947, 29 U.S.C. § 254(a) (2012).

31. *Steiner v. Mitchell*, 350 U.S. 247, 252-53 n.2 (1956).

32. See *id.* at 256.

33. See *Integrity Staffing Sols., Inc. v. Busk*, 135 S. Ct. 513, 518 (2014).

technologies may have to be litigated for clear rules to emerge. Nonetheless, this historical and statutory context, particularly the rules governing overtime, sets the stage for the rest of the Essay, which discusses the challenges that the shift to cloud computing poses to labor regulation.

## II. CLOUD COMPUTING AND LABOR LAW

This Part explores the ways in which the features of SaaS applications challenge our conception of work as shaped by existing labor regulations.

Scholarly literature on the impact of new media on labor regulation is limited.<sup>34</sup> Despite this paucity of academic commentary, the drawing of work boundaries has financial implications. Narrow definitions of work exclude activities that ought to be compensated, while broad ones would capture as compensable work activities that could be negligible. The treatment of workers while they are on call is perhaps the closest courts and the Department of Labor have come to addressing the overtime issues arising from the use of SaaS applications. Department of Labor regulations indicate that employees are considered to be working when they are required to remain on the employer's premises or so close to the premises that they cannot spend their time effectively on their own pursuits. In contrast, employees that must merely leave information about their whereabouts are not considered to be working while on call.<sup>35</sup> The Seventh Circuit qualified this distinction in *Dinges* by explaining that the latter situation may be compensable if employees are called to work so often that they are unable to use their personal time effectively.<sup>36</sup> Applying this reasoning to the use of SaaS applications, it is arguable that since these applications are often installed on mobile devices carried around by workers, the spatial requirement for being on the employer's premises is moot because work can be performed anywhere. That leaves only the consideration of whether the calls to work render the use of personal time ineffective. The factors evaluated to determine an on-call employee's freedom to engage in personal activities include: the frequency of call-ins; the length of time within which to respond to a call-

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34. Some scholars consider the possible legal arguments for the application of the FLSA to the conduct of work on smartphones. See, e.g., Sean L. McLaughlin, *Controlling Smart-Phone Abuse: The Fair Labor Standards Act's Definition of "Work" in Non-exempt Employee Claims for Overtime*, 58 U. KAN. L. REV. 737 (2010) (discussing potential overtime claims for work conducted on smartphones while off the clock).

35. 29 C.F.R. § 785.17 (2011).

36. *Dinges v. Sacred Heart St. Mary's Hospitals, Inc.*, 164 F.3d 1056, 1058 (7th Cir. 1999).

in; the ability to trade on-call responsibilities; the number of on-call employees at a time; and the actual engagement in personal activities while on call.<sup>37</sup>

The results of the analysis of each factor will vary based on the communication culture of the organizations using these cloud-based applications. Some employees may receive more messages than others, and responding to some messages may require more mental exertion than other messages. The latter kind of messages may prevent employees from engaging meaningfully in personal activities, thereby increasing the possibility of being classified as work. Some employees of companies like Amazon may be required to be online even outside of work hours,<sup>38</sup> some may work for employers that require them to sign off, and others may work for employers that do not articulate any rules on the subject. The range of possible internal corporate policies is vast, as is the number of employees affected by these applications. For example, Slack,<sup>39</sup> one of the leading SaaS applications, has over nine million weekly users in the United States and is used by 43 of the Fortune 100 companies.<sup>40</sup> Microsoft Teams, another popular SaaS application, is available to over 85 million Office 365 users.<sup>41</sup> Even Facebook has entered the SaaS application market, creating an SaaS application called “Workplace,” which is utilized by organizations with hundreds of thousands of employees.<sup>42</sup> The growth of this new technology

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37. Cf. Christopher S. Miller et al., *The Impact of Electronic Paging and On-Call Policies on Overtime Pay Under the FLSA*, 11 LAB. LAW. 231, 235-36 (1995) (discussing factors to consider “when determining whether an employee has sufficient use of on-call time for personal activities”).
38. See Jodi Kantor & David Streitfeld, *Inside Amazon: Wrestling Big Ideas in a Bruising Workplace*, N.Y. TIMES (Aug. 15, 2015), <http://www.nytimes.com/2015/08/16/technology/inside-amazon-wrestling-big-ideas-in-a-bruising-workplace.html> [<http://perma.cc/MED8-TKVD>].
39. Slack’s interface features a list of channels and contacts on the left side of the screen and allows users to send messages directly to specific users or to a channel of users. Channels are formed by bringing together groups of users with a shared interests or job duties that requires group communication. So, within a company, each department may have a separate channel, or each project may have a separate channel. Besides chat and search functions, the software allows the users to place calls and use third-party integrations like Google Drive. There are also bots designed to carry out specific functions like scheduling, placing orders, matching users for social activities, sending inspirational quotes, and a great deal of other tasks. The software has a desktop version and a mobile application, making it easy for users to stay connected to their work and teams.
40. SLACK, <http://slack.com/about> (last visited Nov. 14, 2017) [<http://perma.cc/8GHR-243Q>].
41. Ingrid Lunden, *Teams, Microsoft’s Slack Rival, Opens to All Office 365 Users*, TECH CRUNCH (Mar. 14, 2017), <http://techcrunch.com/2017/03/14/teams-microsofts-slack-rival-opens-to-all-office-365-users> [<http://perma.cc/QY97-75KY>]; SLACK, *supra* note 40.
42. Ingrid Lunden, *Workplace by Facebook Opens To Sell Enterprise Social Networking to the Masses*, TECH CRUNCH (Oct. 10, 2016), <http://techcrunch.com/2016/10/10/facebook-workplace> [<http://perma.cc/96LL-YTTY>].



emphasizes the need for government regulation in this area, especially because uniform self-regulation by employers is unlikely.<sup>43</sup>

These changes also reveal that current labor law provisions are inadequate to govern the use of SaaS applications like Slack, Workplace, and Teams, which blur work and nonwork boundaries. For instance, while certain acts like changing clothes and taking showers can be regarded as integral to workers' primary function, it is harder to make a similar determination in the case of communications between workers on the SaaS applications discussed in this Essay. Communication is arguably integral to the primary function of workers as labor in the current information age is based on the management of information in the network society.<sup>44</sup> This claim may be difficult to sustain when the communications appear to be of a nonwork or playful nature, the very type of communication that these SaaS application designers appear to encourage. As a result, something as innocuous as a funny GIF shared on a Slack channel may challenge the work-related nature of the activities conducted on such channel, thereby undermining the applicability of labor regulations to this technology.

Similarly, temporal-boundary issues arise when nonexempt workers use Slack outside of regular work hours. When workers post to work applications outside of regular work hours, the crucial question in determining the applicability of labor regulation is: are such posts considered work? Some posts may be clearly related to a work project, while other posts can be classified as the digital equivalents of water cooler talk.<sup>45</sup> When workers are in physical workspaces, such casual social interactions hardly affect the assumption that work is being performed. In digital workspaces, however, such conversations may be considered nonwork and therefore not deserving of remuneration. Arguably, seemingly nonwork conversations may be classified as work because they are aimed at team building, and thus, productivity. At present, it is unclear how courts will treat such conduct, but possible factors to consider include those outlined by the Seventh Circuit in *Dinges*,<sup>46</sup> as well as additional factors peculiar to SaaS applications, such as: the nature of the post, the duration of activity,

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43. While there is no data on the total number of employees that use these applications, the number of Slack users, alongside the number of Office 365 users across the world, gives a fair sense of the importance of the issues in this Essay.

44. See generally 1 MANUEL CASTELLS, *THE RISE OF THE NETWORK SOCIETY: THE INFORMATION AGE: ECONOMY, SOCIETY, AND CULTURE* (2d ed. 2000) (detailing the economic development of the modern "Network Society").

45. See Molly Fischer, *What Happens When Work Becomes a Nonstop Chat Room: Has Slack Made the Office More Productive? More of a Snake Pit? More like Tinder?*, N.Y. MAGAZINE (May 17, 2017, 8:00 AM), <http://nymag.com/selectall/2017/05/what-has-slack-done-to-the-office.html> [<http://perma.cc/3ZRD-PY3G>].

46. *Dinges v. Sacred Heart St. Mary's Hospitals, Inc.*, 164 F.3d 1056, 1058 (7th Cir. 1999).

and whether the application is an official work communication for the employer.

### III. RECOMMENDATIONS FOR REGULATION

Companies like Microsoft, Facebook, and Slack have recognized the evolution of how work is performed. By creating applications like Slack, Teams and Workplace, they have situated themselves at the forefront of the architecture of the new labor environment. For instance, Facebook commissioned Deloitte, a management consulting firm, to conduct a study on the future of work, which called for greater transparency in communications and the adoption of new digital tools for collaboration.<sup>47</sup> Workplace is one such tool for communication and collaboration. Similarly, Slack already takes its role as a potential regulator of work beyond mere architecture. For instance, in recognition of its influence on work boundaries, it hosts a blog where it provides guidance for work etiquette.<sup>48</sup>

While SaaS applications certainly challenge the neat dichotomies of time and space that formed the boundaries of work in the industrial age, the applications may also offer some assistance in measuring and regulating work.<sup>49</sup> At first glance, cloud computing applications' architecture may appear to strip workers of protections such as mandatory overtime and surveillance. After all, these applications are designed to make work mobile and constantly accessible via mobile devices like smartphones. However, the SaaS application features, rather than undermining the provisions of labor law, can be leveraged to promote the objectives of the law. For example, the large amounts of data collected on workers' application use provides information about work patterns and work duration for each worker. Consequently, these data-collecting capacities offer not just traceability, a central feature of Lawrence Lessig's argument for

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47. *Transitioning to the Future of Work and the Workplace: Embracing Digital Culture, Tools, and Approaches*, DELOITTE 3, 8 (2016), <http://www2.deloitte.com/content/dam/Deloitte/us/Documents/human-capital/us-human-capital-transitioning-to-the-future-of-work.pdf> [<http://perma.cc/N4TZ-WPJY>].

48. See, e.g., *Slack 103: Communication and Culture*, SLACK (Oct. 21, 2016), <http://slackhq.com/slack-103-communication-and-culture-c129cd970e78> [<http://perma.cc/47HH-9R2C>].

49. The applications have the potential to exemplify Lawrence Lessig's idea of using software code in aid of regulation. See LAWRENCE LESSIG, *CODE: VERSION 2.0*, at 67 (2006) (identifying four components of regulation: architecture, market, law and norms); see also Langdon Winner, *Do Artifacts Have Politics?*, in *READINGS IN THE PHILOSOPHY OF TECHNOLOGY* 121 (David M. Kaplan ed., 2004) (discussing the claim that structures and systems "can embody specific forms of power and authority").

regulation through code,<sup>50</sup> but also measurement of actual time worked, an important part of labor regulation, especially overtime. Thus, the shift of work to digital environments like SaaS applications gives software designers the ability to shape the nature of work more quickly than government regulators.

Slack is a suitable reference for the kind of regulation this Essay envisions. The application has features that notify users when they are sending messages outside of certain time frames or across time zones. The notification appears to be a step towards a form of soft regulation or soft power in the digital work environment of numerous teams. With regulatory backing, such features can be revised from mere suggestions to error notifications or a queuing up of messages until the established work windows open. Such a regulation could also require users of work-based SaaS applications to register on the software as exempt or nonexempt employees, with the latter subject to automatic usage restrictions based on the forty-hour work week. Overtime will be at the discretion of the employer, who would have administrative powers to override restrictions in cases where overtime pay will be paid.

Given software companies' influence on shaping the modern workplace, the government may benefit from some level of indirect regulation of work through regulation of software designers. Even in the absence of indirect regulation, SaaS applications can assist in the enforcement of labor laws because they provide records of work patterns and evidence as to the number of hours spent in communication on SaaS applications. Such information, easily obtainable given the archival properties of the software applications, provide evidence of compliance and can be used in prosecuting noncompliant employers. In fact, SaaS applications already appear to anticipate court cases, as they have processes in place for downloading data in response to discovery requests.

Employers can also rely on the capacities of SaaS applications for compliance with labor laws. Employers could flag user accounts as exempt or nonexempt, allowing the latter accounts to be suspended during certain hours, thus obviating the need for internal policing of certain classes of workers.

Despite the capacity of these applications to assist in the enforcement of the regulatory regime, as it currently stands, the law needs to do more to respond to the demands of the new digital workplace. While American legislators have yet to act, some European countries have adopted remedial measures. For example, France recently passed a law establishing the right of employees to dis-

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50. LESSIG, *supra* note 49. Lessig explains that to regulate behavior, states need to be able to trace conduct back to actors. He identifies identity, authentication, and credentials as necessary for associating actions with individuals. He points to the Internet's capacity to allow tracing of actions back to the responsible actors as a crucial element of regulation. Similarly, users/workers are identifiable on the SaaS environments, so regulation of their work hours is possible.

connect from electronic communication after work hours.<sup>51</sup> The law requires employers with over fifty employees to negotiate the conditions of use of electronic communication tools with employees. Such employers are also required to create a charter establishing and defining employees' right to disconnect. A similar law, leveraging the power of SaaS companies like Slack, Facebook, and Microsoft, could require that communication services be disabled during certain time windows.

Another serious challenge is whether workers' positive perception of SaaS applications will cause regulators to be complacent towards their disruption of existing labor regulation. Ordinarily, workers are incentivized to raise issues of overwork, but given the integration of work and nonwork on these platforms, some workers report that work relationships are transformed into friendships.<sup>52</sup> This fact may encourage some workers to work excessive hours.<sup>53</sup> Given that SaaS applications are designed to help users enjoy work, thereby boosting productivity, it is important for the state to step in and protect workers from their own tendency to blur the lines between work and play.<sup>54</sup>

As Hochschild observes, some workers may view work as a source of escape from the pressures of home.<sup>55</sup> In the context of SaaS applications, this would manifest where workers perceive their application use as a social media interaction, rather than as a work task. Of course, individuals have autonomy and self-determination interests at stake where labor law decides whether to regulate an activity. Nonetheless, the state has an ongoing obligation to protect workers from exploitation, and that obligation does not cease simply because workers accede to their own exploitation. The state's duty is especially salient where workers may be influenced to perceive their activities as leisure rather than work because of the similarity between social media applications and SaaS applications.

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51. See Alanna Petroff & Océane Cornevin, *France Gives Workers 'Right To Disconnect' From Office Email*, CNN (Jan. 2, 2017, 12:26 PM ET), <http://money.cnn.com/2017/01/02/technology/france-office-email-workers-law/index.html> [<http://perma.cc/LG88-D9JK>].

52. Fischer, *supra* note 45.

53. GREGG, *supra* note 6, at 169; see also HOCHSCHILD, *supra* note 5, who observed that workers in her case study preferred to spend more hours at work, even when presented with the opportunity to spend more time at home.

54. SLACK, *supra* note 40 (claiming to make "work simpler, more pleasant, and more productive").

55. HOCHSCHILD, *supra* note 5, at 113.

**CONCLUSION**

This Essay has argued that SaaS applications can be integrated into the regulatory framework of labor law because: (1) they can be designed to impose technical restraints on overwork; (2) they can provide data about work hours of individual employees in the event of a review; and (3) they are already shaping the way work is performed. Incorporation into the regulatory framework will ensure that the features of SaaS applications conform to existing labor regulation. Despite possible pushback against their incorporation into the regulatory framework for labor law,<sup>56</sup> companies responsible for creating and maintaining digital work platforms like Slack, Teams, and Workplace are key players in shaping the experience of the digital workplace and ought to be integrated into labor law's response to 24/7 cloud-based work environments.

This Essay's discussion of overtime rules also implicates labor law's objective of ensuring that work is properly remunerated. It appears that the social consequences of overwork are being ignored in favor of direct financial concerns. There are myriad health and social consequences of overwork, including job stress.<sup>57</sup> There are also indirect economic implications of overwork, estimated to be \$150 billion per year.<sup>58</sup> Protecting the financial interests of nonexempt workers, who constitute an estimated seventy-three percent of full time

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56. The envisioned pushback is consistent with what Gillespie describes as the “discursive positioning” of platforms. See Tarleton Gillespie, *The Politics Of ‘Platforms,’* 12 *NEW MEDIA & SOC’Y* 347-364 (2010). While the applications fulfill the computational standards for being platforms—the capacity to be programmed—there are legal implications of the position that this Essay advocates. As Gillespie observes, the platform descriptor “can be a way not to trumpet [a] role but to downplay it.” *Id.* at 357. Gillespie was referring to online content providers’ attempts to enjoy the revenue benefits associated with hosting content while avoiding intermediary liability when users upload content like child pornography and pirated music. Internet intermediaries have frequently sought and obtained immunity and “safe harbor” protections from liability for the illegal actions of third-party users. See, e.g., Communications Decency Act of 1996, 47 U.S.C. § 230(c)(1) (2012) (affording Internet Service Providers immunity from defamation liability); The Digital Millennium Copyright Act Of 1998, 17 U.S.C. §§ 512 (2012) (providing immunity to Internet Service Providers against most secondary copyright liability claims). The same logic is applicable here. While Slack, Facebook and Microsoft appear eager to define the future of work, based on the history of corporate aversion to intermediary liability, they are unlikely to embrace obligations to contribute to the enforcement of labor regulation.
57. Jorgensen & Golden, *supra* note 11 (estimating that job stress costs industry “\$150 billion per year in absenteeism, health insurance premiums, diminished productivity, compensation claims, and direct medical costs”).
58. Rebecca Donatelle & Michelle Hawkins, *Employee Stress Claims: Increasing Implications for Health Promotion Programming*, 3 *AM. J. HEALTH PROMOTION* 19-25 (1989).

workers,<sup>59</sup> through the current overtime rules does not go far enough. Nonexempt workers, particularly knowledge workers, are compelled to operate on the 24/7 schedule, simultaneously in work and nonwork spheres. Incorporating these applications into the regulatory framework will do more to protect nonexempt workers and further guard against “presence bleed.”<sup>60</sup>

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59. Janet C. Gornick et al., *EPI Briefing Paper #189: The Work-Family Balance: An Analysis of European, Japanese, and U.S. Work-Time Policies*, ECON. POL'Y INST. 4 (2007), <http://www.sharedprosperity.org/bp189/bp189.pdf> [<http://perma.cc/V7GD-SCXM>] (noting that “approximately 27% of full-time workers in the United States are exempt”).

60. GREGG, *supra* note 6, at 2.