Contested Boundaries Of Digital Work

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Abstract
This study examines gaps between work as imagined under labor regulations and as performed in the digital age. Through interviews, content analysis of corporate documents and case studies of enterprise software applications, it explores the competing views of spatial, temporal and data boundaries of digital work held by labor stakeholders—employers, workers, retailers and advertisers—in the absence of labor regulations adapted for the digital age. Driven by the desire to increase productivity, protect corporate assets and monitor workers, employers establish corporate policies that embrace the benefits of fluid work and non-work boundaries without taking on associated responsibilities for worker protection. Workers on the other hand are influenced by their socio-economic circumstances and engage in boundary management behaviors that undermine their interests or preferences. In pursuit of profit maximization, enterprise software companies, retailers and advertisers amplify an already dominant employer perspective, leaving workers at a heightened risk of the adverse effects of blurred work boundaries—including lost wages, personal time and privacy.

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CONTESTED BOUNDARIES OF DIGITAL WORK

Opeyemi Akanbi

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ABSTRACT

CONTESTED BOUNDARIES OF DIGITAL WORK

Opeyemi Akanbi

Joseph Turow

This study examines gaps between work as imagined under labor regulations and as performed in the digital age. Through interviews, content analysis of corporate documents and case studies of enterprise software applications, it explores the competing views of spatial, temporal and data boundaries of digital work held by labor stakeholders—employers, workers, retailers and advertisers—in the absence of labor regulations adapted for the digital age. Driven by the desire to increase productivity, protect corporate assets and monitor workers, employers establish corporate policies that embrace the benefits of fluid work and non-work boundaries without taking on associated responsibilities for worker protection. Workers on the other hand are influenced by their socio-economic circumstances and engage in boundary management behaviors that undermine their interests or preferences. In pursuit of profit maximization, enterprise software companies, retailers and advertisers amplify an already dominant employer perspective, leaving workers at a heightened risk of the adverse effects of blurred work boundaries—including lost wages, personal time and privacy.
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Introduction

Dave hated his working conditions but needed the paycheck. Every weekday, he drove over 75 minutes to the office to spend 8 hours making conference calls. Although he performed almost all his duties in digital spaces, “the higher-ups” were intent on seeing him at his physical work desk between 9 a.m. and 5 p.m. Because he collaborated with colleagues in different time zones, he remained tethered to the digital workspace outside of the mandatory desk time. He questioned the logic of his employer’s rules. Did “the higher-ups” insist on his physical presence so they could watch him? Was IT logging and reporting his online activity to “the higher-ups?” Were the enterprise software applications on his mobile device a spyhole into his life? Dave thought he might be paranoid. But preferring to err on the side of caution, he tried to separate work and non-work. Still, he shopped online in the office. He joined conference calls on the long drive to work while simultaneously bonding with his 10-year old son before dropping him off at school. He went over work emails just before bed. For Dave, work was unbounded and so was non-work.

The spatial, temporal and data boundaries that separated Dave’s world of work from non-work were unraveling and like many knowledge workers in the digital age, his boundary management preferences did not align with his employer’s. As corporate documents indicate, many employers have taken advantage of outdated labor and workplace privacy laws to impose self-serving work boundary policies promoting productivity, asset security and worker surveillance. Workers, on the losing side because employers hold jobs essential for economic survival, engage in boundary management behavior that undermine their interests or preferred work boundaries. Without allies among the other stakeholders in the digital
work environment, workers risk data privacy, wages, health and personal time. Attempts to restore a balance in work and personal time, like shopping online at work, merely expose more data to employers, exacerbating the risk to privacy. Unconcerned with these risks and driven by data indicating higher levels of email engagement during work hours, retailers and advertisers strategically schedule email marketing campaigns and major online sales events to promote consumerism in workplaces.

Technology companies, responsible for creating enterprise software that allow digital work environments to transcend spatial and temporal boundaries, can offer features to minimize the risks workers face. However the profit-making incentives of corporations require alignment with the interests of paying customers—employers. So, while promising employers data archival and increased worker productivity in exchange for money, enterprise software companies offer workers a “delightful” and “fun” user experience, obscuring larger questions about corporate control of work boundaries and the consequent risks to workers. To protect workers operating in digital environments dominated by corporate imaginaries, laws on labor and workplace privacy need to evolve.

In pursuit of this overarching recommendation to rethink the laws of the digital workspace, this study focuses on spatial, temporal and data boundaries of knowledge work in the digital context. In the 21st century, digital environments have become important work sites, with significant consequences for contemporary society. Work, which has held varied connotations, including agrarian endeavors, artisanship in small shops, factory and office work, has now evolved to include labor in digital environments. Although existing studies have provided accounts of the tensions between capital and labor over temporal work boundaries in the 20th century, the widespread conduct of digitally mediated labor calls for a re-examination of the imagined boundaries of work to ensure that labor policies, designed to
protect workers from corporate exploitation, reflect the particularities of digital work in the 21st century. To this end, this study provides a contemporary account of the competing imaginaries of spatial and temporal work boundaries offered by actants in the labor space—workers, technology, government and corporations.

Using a mix of methods, this study focuses on actants’ varied attempts at defining and navigating the temporal and spatial boundaries of work to protect their interests. The variations in boundary perspectives manifest in multiple forms. In one form, the bounding rules workers imagine emerge from laws and policies deviate from the actual rules made by laws and corporate policies. From another perspective, assumed boundary navigation behaviors underlying labor regulation deviate from actual practices of workers and corporations. In addition, technological visions of work, which offer software as catalysts for transforming work into collaborative utopias, highlight gaps between intended and actual use.

Laws affecting work boundaries are informed by legislative and judicial imaginaries of work. By imaginaries, I borrow from sociological and philosophical definitions of the concept and re-contextualize it to mean the ways makers of laws—both statutes and case law—think work is and should be conducted. These ideas about work practices shape work related laws, which in turn exert influence on workers. But the influence of law on workers’ boundary navigation behaviors depends, to some extent, on workers’ understanding of these laws. In some instances, the worker may be compelled by technological restraints or close management supervision to conform to the actual contents of the law. In many cases however, daily decisions about boundary navigation are left to the discretion of the worker, whose sometimes-flawed understanding of laws and policies of work lead to creative boundary practices that defy neat categorization into work and non-work.
Communication technologies, examined using case studies of email and Slack (which sets itself up as an alternative to email), also reveal the disconnect between imagined and actual practices. The narratives of productivity and collaboration that accompany the adoption of these technologies fail to manifest in actual practice. The promises that enterprise software will transform work into a pleasant, delightful, democratic and transparent activity fall flat in the face of organizational cultures of hierarchical control that are reflected in boundary navigation. Although software exerts an undeniable effect on organizational culture, they are nonetheless situated within a framework where power is constantly negotiated by actants, including technology. As this study goes on to show, workers may unilaterally adopt software for work, thereby hijacking a decision that management will ordinarily make. But companies can counteract utopian visions of work by simply co-opting such software into the larger framework of organizational control, in a move that doubles as evidence of acceding to worker preferences.

The loaded narrative of tolerance is replicated in the practice of shopping online at work. Such behavior, an obvious encroachment on work time and founded in time-based measurement of work, signifies a loss in productivity. However, from an intraorganizational perspective, seemingly permissive corporate policies may cause workers to feel obligated to work longer hours during busy periods. From a broader perspective, whatever productivity losses are suffered by capital as employer are gained by capital as retailer. In essence, capital remains the ultimate beneficiary of activities conducted both by workers in the actual performance of work and in the pursuit of consumerism.

But despite a history of controlling workers, companies do not possess absolute power in the negotiation of work boundaries. Rather, laws, technology and workers continually renegotiate corporate power. The basis for negotiation depends on a variety of factors
considered under common themes that emerge from textual analyses of regulations, critical discourse of enterprise software interfaces, and interviews with workers. Beyond the introductory chapter, the rest of the study is organized to focus on the complex role each actant—law, technology, workers and corporations—plays in the negotiation of work boundaries.

My exploration of the contested boundaries of work engages with scholarly discussions of regulation through software code (Lessig, 2008), labor history (Braverman, 1975), purposive design of artifacts to compel habitual use (Schüll, 2012), organizational memory (Yates, 1990), privacy (Nissenbaum, 2009), surveillance (Zuboff, 2015; Andrejevic, 2006), precarity of knowledge work (Gregg, 2011) and globalization’s influence on workers’ time (Sharma, 2014).

I explore questions like what assumptions about work boundaries are evident in the design of media platforms designed for work? How do these platforms shape the boundaries of work? What is the ownership structure of the corporate owners of the platforms in this space and what are the connections to the political economy of the media in general? What corporate and government regulations attempt to define the boundaries of work? How do these regulations complement or contradict the technical boundaries embedded in the design of enterprise media platforms? Given the technical and regulatory constraints, how do workers and users of these platforms define and navigate the boundaries of work?

This study is an invitation to take a closer look at the assumptions that underlie the perceptions of work and how they differ from the daily experiences of workers whose power is largely circumscribed in the constant negotiation of temporal and spatial work boundaries. Unable to change the structures that inform organizational culture and expectations of productivity, these workers are compelled to develop tactics for ensuring tolerable work
boundaries. But the knowledge of and capacity to deploy negotiation tactics vary from one worker to another, suggesting that attempts to adapt labor policies to the actual experience of work ought to straddle the line between indiscriminate application and personal preferences. With worker health, privacy and fair remuneration at stake, this study sets about the task of illuminating the incentives, alliances and risks associated with work boundaries.

**Theoretical Foundations and Literature Review**

This section is organized into three parts that set up the rest of the discussion in this study. First, regulatory theories speak to the various rules designed to define the limits of work. Second, labor history and organizational studies explain the longstanding concern about work boundaries. Finally, technology and media studies allow an analysis of the role of media in bounding work. In sum, the study is a product of counterbalancing positivist positions with historical, sociological and critical perspectives on the regulation of work in post-industrial times.

**Regulatory Theory**

Traditional regulation is typically a two-way relationship between the regulator and the regulated entity. Formal labor laws like the Fair Labor Standards Act and the Family and Medical Leave Act fall into this category. Smart regulation on the other hand proposes that other actors, besides these two, impact the regulatory relationship (Gunningham, Grabosky & Sinclair, 1998). It is a flexible form of control that draws not only on government but also on corporate entities and individuals. I extend this logic of smart regulation to the current study of work boundaries and propose that the regulatory relationship for labor is not
between the government and the worker but among various actors including organizations, technologists and the society in general. I rely on the idea of smart regulation for developing what I describe in this study as a networked regulation of work boundaries, where the interactions between the various actors in the labor network influence work boundaries.

The traditional regulatory actor, government, primarily uses administrative law for labor regulation. Administrative law’s usual focus on public agencies like the Federal Communications Commission and the Federal Trade Commission often obscures the important role private actors play. Notwithstanding administrative law, private actors are regulating behaviors and meting out penalties in much the same way that a government might. This private regulation occurs either in combination with broader government regulation or as an alternative to government rules (Freeman, 2000).

In digital media industries, entire spheres of activities have emerged outside the ambit of detailed government regulation, requiring the creation of rules to govern the digital environment. These rules, often documented in policies described as “terms of use,” “privacy policy” or “acceptable use policy”, are enforced by moderators hired by technology companies, the owners of interactive media platforms. Content moderation and regulation of other activities in the digital sphere are not necessarily restricted to enforcing predetermined rules. Often, technology companies find themselves responding to novel situations that existing laws or platform policies fail to anticipate. For instance, the rise of cyber bullying and revenge porn led to the creation of platform rules against such behavior, and later, state legislation on the subject.

However, the United States government has been reluctant to pass laws that negatively affect the operations of digital media companies, citing a concern for stifling innovation. As a result, these companies have a wide ambit of power to regulate their own operations and
the behavior of their users. Notably, laws at the federal level, like the Communications Decency Act, were designed, not to regulate the platforms, but to allow self-regulation. In particular, section 230 of the Act offers media companies immunity from liability for content posted on their platforms, leaving them free to make and enforce their own rules about permissible speech.

Since online spaces are critical loci for democratic participation, media platforms have developed and maintain systems of governance separate from doctrinal laws. This type of private governance has been examined in relation to speech and content creation on social media platforms (Klonick, 2018). Executives of these platforms understand the governance role their platforms play and publicly embrace it as a measure of their global influence. For instance, Kirkpatrick (2010) quotes Mark Zuckerberg, CEO of Facebook describing the platform as more of a government than a company because of its capacity to set policies for many users.

But the extensive governance role that technology companies play in the regulation of speech, privacy, democratic participation and human interaction in general is not without its troublesome aspects. Recent public discourse about politically motivated misinformation on social media has trapped companies in a peculiar position where they are not applauded for their ability to connect the world but are castigated for shirking their duty to protect democratic processes, a role that is neither clearly defined nor formally assigned.

Although technology companies typically push back against the imposition of such social and political responsibilities by presenting the platform neutrality argument—an argument against liability for content on platforms—, the global political climate has been largely intolerant of excuses. Facebook initially opted for silence (Vaidhyanathan, 2018). Subsequently, the company went on to acknowledge the possibility that its platform's
business might have some negative effects and hired thousands of content moderators while remaining under public scrutiny. After questions from Congress, scolding from traditional media and self-righteous rebuke from executives at other tech companies like Apple, Facebook was saddled with public sanctioned administrative authority to moderate platform content and govern other platform interactions.

Facebook was not alone in its forced retreat from the neutrality argument. Jack Dorsey, CEO of Twitter also moved away from the idea that Twitter was a neutral platform, explaining that platforms had to write rules and enforce them in an impartial and transparent manner. Since the exercise of power by social media platforms affects the democratic rights of users (Cohen 2012, Klonick 2018), the authority of these platforms is quite important. At first glance the authority to exercise power over free speech on these platforms derives from the contractual relationship between users and the platform. However, the political implications of free speech demand a different perspective on the authority of these platforms, in particular, the idea that the authority to exercise control over speech is not purely contractual but is also connected to justifiable public functions underlying such exercise of power. Ruggie (1982) in his discussion of authority offers a useful way of thinking about similar functions, which he describes as “legitimate social purpose” (p. 382).

Scholarly connection of the concepts of power, authority and legitimacy is fairly constant across literature: power is the ability to compel or prevent certain behavior while authority is the legitimate exercise of such power. The idea of legitimacy is however caught between normative and positive approaches, where the former relies more on social utility and the latter, on the process of enactment. In this study, I show how the non-exclusive approaches are represented in the regulation network of work boundaries. In essence, I show how the
exercise of certain powers of technology companies is legitimized through social utility discourses.

Law, as a form of power derives its legitimacy from procedure grounded in the principle of popular sovereignty (Calhoun 1992). In current times, popular sovereignty is considered the product of liberal democracy. While governments may enjoy legitimacy derived from established public processes of ascertaining popular sovereignty, private actors like technology companies have no access to such public legitimizing processes and must rely on private processes undergirded by legitimate government power. For instance, section 230 of the Communications Decency Act, passed by Congress, allows interactive platforms to restrict access to objectionable content without liability.

The social consequences of the exercise of technology companies’ power (or “tech power”) to regulate and shape behavior have been explored extensively (Turkle, 2011). However, the political consequences of tech power only became a popular topic after the 2016 US elections, despite the availability of academic studies pointing to the impact of online platforms on political attitudes and behaviors. For instance, Bond et al (2012) reported that a 61million-person experiment showed a connection between political mobilization messages on Facebook and “political self-expression, information seeking and real-world voting behavior.”

Discourses about the exercise of tech power in ways that affect the political environment belong to two largely incompatible categories. One primarily advanced by civil society is concerned with protecting users’ democratic rights from excesses of tech power and third parties, including governments looking to constrain users’ democratic rights through technology companies. The other is from the larger democratic society and is concerned
with protecting democratic society and political processes from actors that seek to
manipulate or misinform citizens, or exploit and subvert political processes.

While both discourses appear to target a similar goal—the protection of democratic
ideals—they approach it from different perspectives and more importantly, put forward
opposing arguments about the place of technology companies in contemporary democracy.
The civil society argument is founded on the idea of neutral, largely invisible technology
companies, supporting infrastructure for the exercise of free speech and civil discourse while
becoming visible only to protect users from third parties. The larger democratic society
argument is founded in the idea of an active platform scanning activities for threats against
democratic society and clamping down on bad actors to protect society. Fortunately for
technology companies, these perspectives can be played against each other. For instance, in
response to concerns that bad actors are exploiting online platforms to spread
misinformation, technology companies can legitimately argue that such risks are the
downside of promoting free speech.

The competing arguments about technology companies’ role in society are replicated in
the enterprise world. Arguably, enterprise software companies are neutral platforms that
merely facilitate the process of work. However, they are also embedded with design features
that arguably shape the experience of work and the relationship between employer and
worker in ideologically inflected ways.

The legitimacy of both consumer and enterprise technology companies’ power over
behavior is found in contract. The terms of use and associated policies of a technology
company’s platform form contracts with users. Rights and obligations of both parties flow
from these contracts, subject to the related government laws with which the parties must
comply. These contracts have received a good deal of attention including challenges about
their complex and dense language. McDonald & Cranor (2008) note that reading privacy policies, which are contracts, will cost the United States about $781 billion in lost wages for the time spent reading.

One area these often-unread policies fail to address is behavior calculated to unfairly influence political decisions. And while recent events have shown public interest in clamping down on misinformation and manipulation, there was no prior legislation or user policy on the subject. Rather, Facebook’s decision to hire thousands of moderators is a response to recent public and congressional pressure. Arguably, the public demand to address the problem legitimizes Facebook’s exercise of power to check misinformation on its platform.

The tensions surrounding tech company responsibility in the consumer space are replicated in the enterprise world. I juxtapose private contractual responsibility of technology companies with broader social implications of the power of technology companies to influence the way work is performed. A wide range of social, economic and political activities are subject to tech company power through private contracts embedded in the use policies of platforms. Unlike the political discourse surrounding political manipulation, from which a form of legitimacy may be assumed for subsequent moderation efforts, there is little discussion of the social implications of the use of enterprise collaboration media for work. Nonetheless, similar narratives of power, authority and legitimacy affect enterprise media. With the absence of public discussion also lies a lack of consensus about the social and political vulnerabilities created by using enterprise collaboration media. The lack of discourse and consensus may be the result of a society quite unaware of the behavior modifications that enterprise media have imposed. Alternatively, it could result from the greater societal focus on the conditions of consumption rather than the conditions of work. While this study highlights the absence of public and academic discussions of the critical underpinnings of
the choice of enterprise media for collaboration in organizations, its aim is not to identify the reasons for this gap, but to start a critical conversation about the connection between enterprise media and the socio-legal construction of work boundaries. To the extent that we consider the legitimate social purpose of the exercise of power by social media companies over users to be the protection of democratic values without jeopardizing legal rights, we may apply the same logic to enterprise media and the protection of worker welfare.

**Labor History and Organizational Studies**

Academic studies about the use of enterprise media for collaboration in organizations and the boundaries of work and non-work are concentrated in organizational studies. However, such studies tend to be institutional and geared towards productivity and efficiency insights. For instance, Rothbard, Phillips & Dumas (2005) examine integration and separation tendencies of workers, concluding that people with a greater preference for segmentation are less committed to organizations when they have greater access to integration policies.

Labor historians tend to offer more critical accounts of enterprise technology. However, with a few exceptions, these accounts are situated in the 20th century or prior. Scholarly accounts of labor history (Braverman 1998, Cowie, 1999) and labor regulations (Hunnicutt, 1996) serve as a backdrop for a meta-analysis of work boundaries. Through these accounts, details of the historical treatment of work boundaries can be extracted and compared to contemporary boundary practices. Labor history also serves the important conceptual role of challenging attempts to embrace technological determinism. Accounts of workers’ experiences in the 19th and 20th centuries show that the difficulty with drawing distinctions between work and non-work predate any specific technology or social configuration. They show that the fuzziness of work boundaries has persisted through agrarian, industrial and
information societies. Although there is a tendency to treat the inability to bound work as a problem exacerbated in the information age, my analysis of accounts of the history of work suggests that work boundaries have been ill defined for decades and may not necessarily be a societal misnomer in need of correction.

In his treatment of different types of work boundary problems—precarious or temporary work—Hyman (2018) observes that temping pervades different layers of organizational hierarchy and began after the Depression when “consultants supplanted executives at the top, temps replaced office workers in the middle, and day laborers pushed out union workers at the bottom.” While one might be inclined to attribute temping to more recent developments, Hyman argues that it has been the preferred staffing model for many decades. Similarly, although it might seem that the problems with bounding work are the direct result of recent developments in capitalist approaches to work or adoption of enterprise software, the issue is of an older sort and traceable to social, political and economic causes, not just enterprise software.

Nonetheless, the underlying logic of labor regulations assumes a separation between work and non-work that may have worked for factory jobs in the industrial age but breaks down in other employment contexts. Despite the inaptness of this assumed distinction between work and non-work, scholarly studies in organizational management have retained the general logic of the distinctiveness of work. These studies (Rothbard, Phillips & Dumas 2005; Leduc, Houlfort & Bourdeau 2016) are structured to collect data about workers’ preferences for segmentation or integration and measure the impact of each of these choices on outcomes relating to work performance and satisfaction in non-work spheres. By treating integration and segmentation as questions of personal preference, these studies fail to acknowledge the network of actors that combine to influence the preferences of individual
actors or even override their inclinations. Studies that acknowledge the role of other actors besides workers tilt towards the impact of precarious employment and mobile devices on work boundaries. Such studies contend that precarious employment contributes to the pervasive use of mobile devices, which in turn expand work beyond its traditional confines (Gregg, 2011).

Although technology tells only a part of the story of work boundaries, it is an indispensable element both in labor history and contemporary accounts of work. In combination with organizational management styles, technology has played a central role in communication and record keeping. Over time, these records of work processes have evolved from being documented in paper memos and stored in file cabinets in the 20th century (Yates 1993) to being automatically logged by various software that have come to form the primary platforms on which work is performed in many modern companies.

Regardless of the method of storing and retrieving data in organizations, the consequence of collection is consistent with scientific management—to eliminate workers’ leverage over specialized knowledge in the conduct of organizations’ business. Braverman (1998) describes this phenomenon as a deskilling of workers, but that may not be an apt description in contemporary times. Rather, there is a tendency towards archiving workers’ activities in the bid to generate data for performance analysis and to shore up organizational memory archives.

**Technology & Media Studies**

Media and communication scholars have written extensively about the working conditions of media labor, focusing on audience labor (Andrejevic 2004) and the working conditions of media workers (Fuchs 2014). This study moves in a different direction and grapples with
theories of control and surveillance arising from the politics of technological artifacts that influence the boundaries of work. I also use the discussion of politics as a segue into a conversation about globalization in the context of mediated labor. By mediated labor, I mean labor performed on media technology platforms.

This study of mediated labor also synthesizes traditional concepts in political economy with the adaptations of the information age. It begins from recognizing the fusion of user and worker categories, in ways that complicate audience labor theories. Proponents of audience labor theories consider the consumption of media a form of work. Earlier versions of this theory focused on mass media (Smythe, 1977; Jhally & Livant, 1986) but a similar logic has been applied to web 2.0 (Andrejevic 2011; Fuchs 2014). Seeking to situate audience digital labor in Marxist framework, Fuchs (2014, 251-2) identifies the commodity emanating from digital labor as threefold: online information in form of user profiles, new meanings as established in social relationships and artifacts as creations of online communities or social systems. A similar frame is applicable to digital media platforms purposed for work but complicated by the underlying labor relationship and the often-possible absence of advertising. Arguably, any labor performed in the use of digital media platforms purposed for work cannot be described as exploitative because the underlying employment relationship is based on remuneration.

However, the existence of a surplus value based on elongated work hours alongside the generation and collection of performance data for archival and analytical purposes supports arguments for alienation. Crary (2013) recognizes the former part of this argument in his proposition that the human cost of an effective 24/7 environment is often undisclosed. User-engagement with social media platforms, while possibly borne out of the desire to engage in cultural production, consumption or interaction, often lends itself to simultaneous
exploitation, for advertising and data collection purposes, of the time spent on the platform (Andrejevic 2012). Digital labor emanating from such user activity serves to perpetuate the dominance of these technology giants, through network effects, further empowering technology companies to unilaterally set the terms of platform engagement and consolidate theoretically separate spheres of activity under their uniform control. Such consolidation serves not only purposes of economic profit but also shapes cultural norms of communication.

Enterprise digital media deliver a similar mixed experience, making work a combination of both paid and unpaid labor (including affective labor) in a digital environment that imitates social media. Jarrett (2016) highlights the importance of “sociality and affective exchanges” on digital media. Although her focus is on consumer usage practices, a similar theme arises in my discussion of digital platforms primarily purposed for work. These platforms often resembling social media interfaces are designed to simulate non-work digital environments and elicit a communication style shared with the non-work sphere. An apt example is Facebook, with its enterprise-adapted platform, Workplace, which closely simulates the Facebook interface.

Turco (2016) examines this co-optation of social media models by firms and provides some insight into the effect of workplace social media use on corporate bureaucracy. In the firm Turco studied, openness was identified as the reason for adopting a social media communication style. Describing the case study as a “conversational firm”—one that attains significant levels of openness without being post bureaucratic—she shows how it uses digital media infrastructure to support a social media model of communication, which in turn acts as a mechanism for controlling workers.
The use of technology as a mechanism of control has been a theme of studies about work for many decades. Charlie Chaplin’s 1936 film, *Modern Times*, provides perhaps the most vivid depiction of workplace technology during the industrial age. His comical performance does little to shield viewers from the harsh realities of machine pacing, industrial assembly and division of labor. The factory scenes in the film re-enact the subjection of workers to technical control, a concept explored by Edwards (1979) in his account of organizational methods in large firms of the twentieth century. He described technical control as embedded in the physical and distinguished it from bureaucratic control, which he defined as the “institutionalization of hierarchical power” (Edwards, 1979 20-1). Expanding categories of control further, he explores the idea of machine pacing, a method of control that compels workers to respond to, rather than set the pace at which machinery is operated.

Other historical accounts of workplace technologies are framed to exclude and sometimes challenge notions of technological determinism. Flowing from Biggs’ emphasis on the rationalization foundations of factory architecture and development, the premeditation and strategic planning leading up to factory design and systemizing, indicates the presence of a rationale for the resulting “machine like order” (Biggs, 1996). Yates also challenged such notions, perhaps more emphatically when she observed the inability of the telephone to curtail the tendencies towards written communication and records. She instead highlighted the contributions of technologies for written communication, like the typewriter and telegraph, to the already growing trend of documentation in the corporation (Yates, 1993).

The depiction of the factory suggests a unidirectional influence of technology where workers are required to conform to the demands of the new systems. The level of control
exerted in the factory through technology is therefore more pronounced and targeted than the control described by Yates (1993). With accounts of speeding up the conveyor belt to increase work pace and productivity, the factory appears a less humane environment than the companies described by Yates (1993). Workers appeared to recognize the detrimental effects of the rational factory and in a rare glimpse into workers’ attitudes to the changes, Biggs (1996) recorded that workers and their spouses complained about the speed and repetition required by the new system to no avail, because of the lack of unions and the existence of a system that had broken work down into such small tasks that it had a high tolerance for attrition.

As Braverman (1998) noted, the fragmentation of labor process due to management methods of systematic management masquerading as scientific process did not flow from the development of workplace technologies. Rather, it was primarily a management method that adapted itself to available technologies, contravening arguments of technological determinism. Taylorism’s three principles according to Braverman’s account were to (1) collate worker knowledge about the labor process for management purposes (2) separate “brain work” from physical labor (3) outline the process and specify the time allowed for task performance. Workplace technology only served as tools for the implementation of these principles. For instance, Yates’ account of the rise of written communication in the workplace, particularly the memo, served the first and third principles while machine pacing and fragmentation of tasks served the second.

The same logic of Taylorism can be seen in the modern workplace. Although conveyor belt and physical information archives like cabinets have given way to the digital environment of the information age, their essence is seen in the pacing afforded through workplace digital communication platforms. These platforms including email, instant
messaging and more recently, enterprise social media, serve the double function of archival and pacing. For instance, a worker that receives a work message requiring the performance of some task is comparable to a factory worker presented with a new item for assemblage by the conveyor belt. Similarly, the archival and search capabilities of new media collate worker knowledge in a modern version of Taylorism.

**Privacy**

In addition to issues of control, the archival and search capacities of enterprise media also raise the question of employee privacy. Privacy is regulated by legislation and case law. Legislation like the Wiretap Act and the Stored Communications Act have been invoked as the basis for challenging or justifying employee surveillance. In addition, case law has evolved to address the Fourth Amendment rights of government workers and the possibility of tortious liability on the part of private employers.

Despite the availability of regulation, privacy can be a difficult subject to conceptualize. As a result, scholars often address specific aspects of privacy. Turow (2017) focuses on consumer privacy; Cohen (2012) and Nissenbaum (2010) address the theoretical and philosophical aspects of privacy; Libert (2015) focuses on third party tracking on websites; Acquisti (2004, 2009) addresses privacy issues using behavioral economics; and Allen (1997, 1998) uses legal and philosophical discourse in her treatment of genetic privacy and her exploration of feminist dimensions of privacy.

Notwithstanding the division of privacy and research approaches, the various subsets, including employee privacy are ridden with complexities as well. Solove (2006) offers a “taxonomy of privacy” useful for unpacking the multi-layered notion of employee privacy. The taxonomy grounds the concept of privacy by identifying and classifying a range of breaches into four categories—information collection, information processing, information
dissemination and invasion. A supervisor’s surveillance of the worker in a co-ed staff rest room for over seven hours (Speer v. Ohio) and the government’s use of a questionnaire to seek information about possible drug use by prospective civil servants and other relevant information from their former employers, landlords and schools (National Aeronautics and Space Administration v. Nelson) amount to information collection. Information processing requires the analysis of personal information collected about the employee. City of Ontario, California v. Quon presents an example of such analysis. Quon, a police officer had repeatedly exceeded the monthly character limits on a city-issued pager. Upon investigation by the police department to determine whether the limit was too low for work related messages, it discovered that Quon had been sending many non-work messages, some of which were sexually explicit.

Information dissemination involves the transfer, publication or some other revelation of workers’ personal data. Levias v. United Airlines is an example. There, the court held that the disclosure of an employee’s medical history to her supervisors and husband gave rise to “viable disclosure action” against her employer. This area of employee privacy may also implicate contract as was the case in Gianneckini v. Hospital of St. Raphael, where the plaintiff entered into an agreement with the hospital to restrict all inquiries about him to basic information like his “dates of service, title, position and salary.” When the hospital nonetheless disclosed other information about the plaintiff, the court held that the disclosure constituted a breach of the contract executed with the plaintiff. Invasion requires an employer’s interference with the employee’s personal life. An employer’s collection of employees’ urine samples, as occurred in Borse v. Piece Goods Shop, Inc., can be described as an invasion.
Holloway & Leech (1993) employ an alternative categorization, classifying work privacy complaints into the following broad allegations: collection of unreasonable types of information; collection through unreasonable methods; use of employee information in a way that unreasonably affects workers’ lives; unreasonable disclosure of employee information by employers; exercise of power over workers in a manner offensive to personal dignity; and retaliation against workers that refuse to comply with unreasonable requests for personal information.

Reasonableness is commonly invoked in such disputes about privacy. The phrase often employed is “reasonable expectation of privacy.” Theoretically, it owes its foundations to social norms, exemplifying the supposed connection between law and social life. In practice though, the connection between a reasonable expectation of privacy and social norms is qualified by problems of norm selection— the identification of the specific norms that will be protected by law; double institutionalization—the use of law to shape social norms; and hegemonic reinforcements—the selection of norms common to an influential group in society (Post, 1989). Empirical evidence also points to discrepancies between what courts say are reasonable expectations of privacy and what the public thinks they are (Slobogin & Schumacher, 1993). Nonetheless, the reasonable expectation of privacy has continued to thrive as a legal test for privacy in constitutional law cases and torts.

The Fourth Amendment protects individuals against unreasonable searches and seizures by the government. The requirement for state action takes non-government workers out of the realm of work-place protection implicit in the text which provides: “The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no warrants shall issue, but upon probable cause, supported by oath or affirmation, and particularly describing the place to be searched,
and the persons or things to be seized.” Although the text does not explicitly mention privacy, constitutional protections for privacy are based on this provision against “unreasonable searches and seizures.”

Justice Harlan’s concurrence in *Katz v. United States* expounded on the notion of privacy derived from the fourth amendment. The concurrence explained that an individual making a phone call in a telephone booth has a reasonable expectation of privacy in the conversation. This reasonable expectation of privacy is the standard by which privacy cases are analyzed under the Fourth Amendment. The standard can be difficult to apply in cases where it is debatable whether the expectation of privacy was reasonable. *Florida v. Riley* exemplifies the problem that is encountered with the application of the standard. The respondent grew marijuana in his home and after a tip off; the police inspected the respondent’s property from a plane flying 1000 feet in the air. Although the court held that the respondent had no expectation of privacy, it would be curious for the respondent to have envisaged that any member of the public would just happen to fly above his property and notice the growing marijuana. Cases like this arguably contract the boundaries of reasonable expectations but subsequently, knowledge of the decision makes it unreasonable for people in similar circumstances to allege a reasonable expectation of privacy.

The reasonableness test is applied to work-related privacy cases as well. However, worker’s reasonable expectation of privacy, if one exists is balanced “against the government's need for supervision, control, and the efficient operation of the workplace” (*O’Connor v. Ortega*). The reasonableness of an employee’s expectation of privacy can be analyzed by determining whether there was implied consent created through notice. In *US v. Simons*, the court held that Simons, an employee of the Federal Bureau of Information Services, a division of the Central Investigation Agency had no reasonable expectation of
privacy in his Internet use because of FBIS’ clear policy of monitoring employees’ Internet use. In essence, if Simons was averse to the policy and thought his Internet activities should be private, he should not have remained in FBIS’ employment. Similarly, in State v. Francisco, the court held that a narcotics detective had “contractually agreed” to the terms of the Sheriff Department Policy that there was no expectation of privacy in the departmental vehicles. Hence, when the detective brought a motion to quash evidence of the cocaine found in the departmental car assigned exclusively to him, the court ruled that he had no expectation of privacy.

Although based in Tort Law, the existence of a reasonable expectation of privacy is just as crucial to sustaining an action in privacy against a private employer. It is not uncommon for employers and workers to resort to contract for clarifying the expectations of both parties regarding employee privacy. Written contracts may be clauses subsumed under employment contracts or may be separate contracts. The contracts may also be implied such that the totality of the circumstances of the employment would determine whether any agreement to refrain from privacy invasions exists in the employment relationship.

Corporate policies on the use of digital media have sometimes worked to workers’ advantage in privacy cases. In Stengart v. Loving Care, the court reasoned that a corporate policy permitting occasional personal use of the company email did not rob a worker of a reasonable expectation of privacy in the emails she sent to her attorney from her company email. Armed with the knowledge that workers hinging their suits on an expectation of privacy in the conduct of personal activities on employer issued devices or networks are likely to fail unless they can show that such expectation is reasonable, employers simply disclaim expectations of privacy in unambiguous terms. In Holmes v. Petrovich, a pregnant employee used her company email account to hold conversations with her attorney about
perceived workplace pregnancy discriminatory practices. She objected to her employer’s access to and use of the emails. However, the court held that it was unreasonable for an employee to have any expectation of privacy, having been informed that the company computer was to be used for company business only, and further that emails sent on the company computer were not private.

Unlike email however, digital media platforms like Slack are designed to be insular. They are typically restricted to internal communications and while some connection with other organizations’ platforms is possible, the audience remains restricted. Nonetheless, it is possible to integrate email applications with digital work platforms like Slack such that emails are delivered to the platform. Such integration can lead to similar privacy disputes as with email because of the data archival and search functionalities common to both email and more robust digital media platforms designed for work. Moreover, platforms are likely subject to similar blanket corporate policies about monitoring employee activities and expectations of privacy. As further explained in the method section, this study will show how corporate policies, influenced by case law on privacy, contribute to the construction of work boundaries.

Work and Non-work

The foregoing demonstrates how various academic fields and court cases have often indirectly broached discussions of the spatial, temporal and data boundaries of work. Some of the academic studies on work are however particularly relevant to this study because of their focus on the interaction between work and non-work domains. Scholars studying issues related to the blur of work and non-work have generally preferred to focus on the intrusion
of work into non-work spheres, a phenomenon that Gregg (2011) described as “presence bleed”. Through an ethnographic study of members of the academia, she showed how technological devices like computers allowed these professionals to put in unpaid work after work hours. According to her research, the continued over-dedication to work is fueled by the system of employment in the academia that ensures a level of precariousness sufficient to keep workers grateful for their temporary contracts and desperate enough to slave for the possibility of something better. Apart from the continual striving in hope of the ultimate academic position, the cultural environment perpetuated by workers in their collective, contributes to the pressure individual workers experience to be constantly at work, for example, replying emails even after work hours. Presence bleed is thus not exclusively attributable to the overt demands of employers; rather peer expectations and collective worker culture play a contributory role.

Similarly, Mazmanian, Yates & Orlikowski (2006) in their study of BlackBerry use in a company, focused on the flow of work into non-work, finding that the increased pressure to be available outside of traditional work hours was higher for lawyers, who had peculiar identity challenges given their move from revenue generating big law firm positions to cost incurring positions at the company, than for sales personnel. Like Gregg, they show the contributions of peer influence and identity to the effect of workplace technologies.

In a more recent study, Mazmanian, Yates & Orlikowski (2013) revealed a paradox between the short-term control that these devices afforded knowledge professionals and the increased expectations of availability that pervaded work teams because of mobile device use. Describing this phenomenon as “autonomy paradox”, they explored how the possibility of gaining access to work “anywhere and anytime” becomes the practice of gaining access to work “everywhere and all the time”, thereby opening the boundaries of work.
Hochschild (1997) moved beyond this unidirectional flow of work into non-work but rather than address the flow of non-work into work, explored the fascinating subject of conflating work and home. While it is a detailed ethnography with insightful findings, it proceeds from certain assumptions that are not necessarily universal and decidedly omits discussions of communication technologies as media through which work and non-work collide. The year of publication of the work, 1997—a time when the workplace was not quite as centered on digital media—may explain the lack of focus on technology. Her finding that many workers embrace work and dread the responsibilities of home contrasts with notions of alienation but omits the experiences of single workers, leaving readers to wonder about the generalizability of the phenomenon, which she describes as “time bind.”

Rothbard, Phillips & Dumas (2005) also place their focus outside of technology when they provide an analysis of worker preferences for integration and segmentation policies in the workplace. Integration and segmentation as employed in the study depict points on a single continuum and the authors view work boundaries in their role as conduits for the entry of non-work into the work domain but not the flow of work out into the non-work sphere. The framework for the study was informed by home and work boundary studies conducted by Nippert-Eng (2008) who similarly refrained from delving into the facilitating role of technology in blurring boundaries, focusing instead on broader boundary management practices across a wide range of artifacts and spatial considerations.

Rothbard, Phillips & Dumas (2005) identify company policy as the driver of blurring behavior, and worker preferences as determining response levels in terms of job satisfaction and organizational commitment. Similarly, Hochschild (1997) delves into the various work-life balance programs at Amerco, the site of her ethnography. However, other works appear to largely ignore the role of corporate policies on the subject. Mazmanian, Yates and
Orlikowski (2006 & 2013), after noting the issuance of mobile communication devices by the company, focused on workers’ experiences and the formation of norms around the use of these devices. Gregg (2011) recognized that employers are implicated in presence bleed but ultimately blames general precarity of employment in academia, alongside peer expectations. Consequently, the literature appears undecided about the primary driver of the blur: corporations or workers?

Hochschild (1997) hinted at an explanation when she relayed an account of a “Group Change Event” organized by Amerco for its workers. The event, which she compared to a revival, was organized in response to the company’s loss of customers. Through a narrative account of the conversations at the event, she demonstrated how the company subtly manipulated participating workers into becoming “believers” in a “managerial viewpoint.” This event represents an example of the subtle ways by which corporations influence worker behavior and ought to be investigated further for insight into the blur between work and non-work, which is a task I undertake here.

I aim to incorporate elements of the socio-material approach, which according to Orlikowski (2007), refrains from privileging humans over technology or *vice versa* but recognizes that both are “constitutively entangled.” I plan to introduce government regulation into my application of the socio-material approach to account for external constraints that tend go unexamined in socio-technical analysis. I hypothesize that the blur between work and non-work is due to a combination of the activities of key actors at the boundaries of work. I have identified the actors as government, technology, corporations and workers. By analyzing the various motivations for boundary preferences in the labor space using an actor-focused perspective, I aim to contribute to an understanding of the
formation of work boundaries and the blur between work and non-work, in a more holistic manner than one perspective might offer.

The study focuses on the United States and focuses on labor laws, technical design, corporate policy and worker behavior. It explores questions like what assumptions about work boundaries are evident in the design of media platforms designed for work? How do these platforms shape the boundaries of work? What is the ownership structure of the corporate owners of the platforms in this space and what are the connections to the political economy of the media in general? What corporate and government regulations attempt to define the boundaries of work? How do these regulations complement or contradict the technical boundaries embedded in the design of enterprise media platforms? Given technical and legal constraints, how do workers and users of these platforms define the boundaries of work?

**Method**

The proposed study adopts a mixed method approach in the investigation of the above stated research questions. The research project relies primarily on qualitative methods of data analyses. To interrogate the various actors and artifacts implicated in the negotiation of work boundaries on digital platforms, I used a mix of complementary methods including the walkthrough method, critical technocultural discourse analysis, discourse analysis of corporate and media texts, and interviews. This methodology expands on the approach of similar works on the subject. These works spanning sociology, communication, organizational studies and management science are primarily ethnographic in nature (Hochschild 1997, Nippert-Eng 2008, Gregg 2011), with limited use of surveys (Rothbard, 2005), thereby providing a largely worker-focused analysis with limited corporate focus. In
contrast, through an analysis of the texts authored by corporations and media articles reflecting the general social setting, I obtained a clear picture of the regulatory environment within which work boundaries are defined and negotiated. Then I proceeded with the use of interviews to conduct the worker-focused layer of analysis present in previous works, but with a focus on digital work.

Discourse analysis in this study allows for close engagement with the articulation of control by employers in corporate policies. Interviews, though not quite as immersive as ethnographies used in previous research on the subject, account for workers’ construction of their reality and clarify possible contradictions between the account of control as recorded in employer-issued texts like codes of conduct and level of enforcement as experienced by workers. Given the conversational nature of interviews (Kvale & Brinkmann, 2008), I clarified respondents’ accounts of their experiences and requested follow-up interviews where necessary.

I also made use of what has been described as “the walkthrough method” (Light, Burgess & Duguay, 2016), which is a process of engaging with an application’s interface to unearth its technological features and consequent cultural and experiential implications. This experiential approach contrasts with the strictly technical computational style of analysis which is generally culture agnostic. It also segues into critical technocultural discourse analysis (Brock, 2012)—an investigation of the actual user practices conducted in response to the technical features of the platform.

I have adopted this multi-method approach because this study combines a Foucauldian understanding of diffuse power (Sheridan & Foucault, 1995) with de Certeau’s notion of creative resistance through everyday practices (de Certeau, 1984). While the current study acknowledges that there is no single locus of power, it also reflects the ability of certain
actors to largely constrain the actions of other actors. As a result, it attempts to identify the strategies established by the former and the tactics deployed by the latter in a dialectic that is reflective of historical tensions between capital and labor. Despite these tensions, historical and contemporary evidence reveal that labor has largely been disciplined by capital through factory design, machine pacing, surveillance, systematic management and wage information asymmetry through factory relocations (Biggs 1996, Braverman 1998, Cowie 2001). So, the study proceeds on the assumption of inequities in the exercise of power based on positional advantages and limitations accruing to actors in the work environment. The multi-method approach allows for a multi-perspective analysis to query these inequities.

Embedded in this approach is the assumption that workers, in their use of digital communication platforms, are responding either positively or negatively to the articulated expectations of corporate management. In my analysis of texts issued by corporate management, I recognize that the texts may serve not just the purpose of providing guidance to workers or setting out the parameters of corporate control over worker conduct, but also a legal function in the event of dispute; a public relations function to display the corporation as a model organization in the society. Similarly, workers are not necessarily responding to codes of conduct. Rather, they may be acting based on socially informed boundary management preferences, often shaped by the media. They may also be responding to peer expectations, modifying their behavior to accord with the under-analyzed control of their colleagues.

The decision to combine interviews with discourse analysis of text was informed by a desire to balance out a constructivist approach in which the silo of textual data is considered the exclusive source of the conception of work and non-work blur. Such radical approach of elevating text as the shapers of social construct Armstrong (1993) is unsuited for this
research project because the socially, technologically and legally constructed norms of what constitutes work and its boundaries are not limited to text.

**Textual Analysis**

Organizational documents such as guidebooks and codes are repositories of information about organizational perspectives on the boundaries of work. Through discourse analysis of the documents, I engage closely with the articulation of control by corporations, analyses of work and non-work blur by media, and narrations of their management of the virtual boundaries or non-boundaries of work and non-work. Organizational documents like guidebooks and codes of conduct, while common to large organizations, were not seen as necessary by startups. Start-ups have similar attitudes to guidebooks as some 20\textsuperscript{th} century organizations. These 20\textsuperscript{th} century corporations rarely had guidebooks or employee guidelines. They thought written rules were superfluous and depended heavily on foremen to direct work performance. Although startups do not retain foremen, there is the prevailing assumption that workers understand the organizational culture and will be corrected by peers when they step out of line. In cases where startups had guidebooks, they were described as living documents (Moore 2015); often existing as shared Google documents and subject to quick changes as cultural shifts occurred. The fluidity made them poor data sources, unlike codes from Fortune 500 companies.

I obtained some organizational documents from corporate websites (mostly Fortune 500) and requested others from companies and workers (mostly start ups). Companies label these documents “Code of Business Conduct” (Marathon Petroleum), “Code of Conduct” (Comcast), “Business Conduct and Ethics Code (Chevron), or “Standards of Business Conduct” (New York Life), among other labels. The codes from Fortune 500 companies,
often many pages long, dedicated specific sections to corporate policies on digital work boundaries. Work boundary policies often manifest as a command to refrain from the personal use of corporate digital media, equipment or network; a disclaimer of reasonable expectations of privacy; a notice of surveillance of all activities on company networks, media platforms and equipment; an acknowledgement and acceptance of personal use of corporate digital media; an admonition for reasonable use, among other policy statements. To identify these policies, I searched each corporate code for words like “personal,” “privacy,” “private,” “monitor,” and “reasonable.” In many of the codes, the section addressing work boundaries in relation to digital media is returned. Sometimes, the results show that the corporate policy on the subject is not restricted to one subject but is spread across multiple sections in the code, in which case I parsed each section to ensure that no contradictions exist. Given the complexity of the legal language contained in the code, there are certain ambiguities, which I reflected in my coding scheme by assigning unclear policies to a separate category of analyses with consequences for my findings.

Corporate codes (listed in Appendix 1) were analyzed based on four categories I identified as expressing companies’ preferred boundaries for work performed using digital media—integration tolerance, privacy expectations, monitoring notices and relevant scenarios. Integration tolerance indicates whether there is an express statement of tolerance for some level of integration between work and non-work, regardless of how minuscule this is. Privacy expectations indicate companies’ disclosures workers’ privacy expectations. Four levels of disclosure about privacy expectations were identified. (1) Yes- The corporate code explicitly indicates that workers have an expectation of privacy in their personal communications on company communication technologies and personal devices used for work. (2) No- The corporate code includes an express disclaimer that workers have no
expectation of privacy in their personal communications on company communication technologies and/or personal devices used for work. (3) Unstated—The corporate code implies the absence of privacy expectations based on a monitoring notice; and/or an express prohibition of the conduct of personal affairs on company communication technologies. (4) Unclear—The corporate code permits personal use of company communication technologies but privacy expectations are not addressed. Monitoring notices refer to disclosures that employee activities on communication devices are monitored while relevant scenarios refer to the presence of examples that depict acceptable and/or unacceptable level of integrating work and non-work on devices.

Walkthrough of Case Studies

At the crux of this study is the idea that corporate codes are not the only source of work boundary perspectives. Communication technologies also create affordances and impose constraints that determine work boundaries. The architecture of software tools embodies notions of work and affects workers’ use patterns. Email and collaboration hubs promote communication methods and serve as searchable knowledge archives that form collective memory of sorts and perpetuate existing boundaries.

Email and collaboration hubs are often cloud-based and reveal technical attempts to materially construct or permeate boundaries. By definition, cloud based applications are generally not device or location restrictive. As such, workers can transcend spatial boundaries with mobile workloads. A high-level explanation of blurring boundaries of work identifies mobile devices and cloud infrastructure as the facilitators of work and non-work integration but the use of specific enterprise software applications are just as important. So this study will probe the use and proliferation of collaboration hubs. I examine the attempts
of collaboration hubs to relegate email from its principal position in organizational communication. At the core of this inquiry are the questions: what is wrong with email; why is there a push toward collaboration hubs; how do email and collaboration hubs affect work boundaries?

While the use of case studies may raise concerns about the potential for generalizability of this study, the selected cases are substantially similar to other enterprise collaboration technologies in the space. As such, the findings may be transferable to other technologies. Gomm, Hammerseley & Foster (2009) suggest that typicality of a case to the target population addresses the concern of generalizability but I make a more modest claim that the findings in this study, as they relate to the specific case studies, may be transferrable to other similar enterprise platforms. However, the range to which a case study is transferrable to other cases is not entirely determined by the researcher, rather, it is largely determined by those seeking to apply the findings of the research (Kennedy 1979). This is not unlike the judicial application of legal precedent, which considers (1) similarity of material facts between the case from which a finding is derived and the one to which it is sought to be applied (2) propriety of application given considerations of justice and social welfare (3) the reason for the findings in the case study and (4) the level of generalizability intended at the time of making the finding (Cardozo 1921). Despite the reduced role of the researcher in the determination of transferability, I suggest that the selected case studies are typical of digital media platforms purposed for work.

The study explores one case of email, Microsoft Outlook and another case of a collaboration hub, Slack. Gartner, an information technology research and advisory firm currently ranks Microsoft’s Outlook as the top cloud email among large public companies and includes Google’s Gmail and IBM’s Lotus Notes as the top email clients among
enterprises in general (Gartner 2016). Microsoft reports that Outlook has over 400 million active users and is a part of the Microsoft Office Suite, alongside popular Office applications like Word, Excel, PowerPoint, and OneNote. The suite also includes services like Skype, Yammer, Exchange and Teams. Unsurprisingly, Microsoft reports that over eighty percent of the Fortune 500 is on Microsoft Cloud. As a result, a case study of Outlook, over Gmail and Lotus Notes may be representative of more workers’ experiences in larger companies.

The second case study, Slack, fits the definition of enterprise social media – a digital platform where workers can view and create content both individually and collaboratively (Fulk & Yuan 2013; Leornadi, Huysman & Steinfield 2013). Although it entered the enterprise communication space in 2013, decades after companies like Microsoft had established dominance in the market, it was rapidly adopted and recorded over four million users in October 2016. By May 2018, it had over eight million daily active users and three million paid users (Statista, citing TechCrunch n.d.).

The Walkthrough Method, which forms the basis for the analysis of Slack and Outlook, entails an analysis of the environment of expected use and technical features (Light, Burgess & Duguay 2016). The elements that make up the environment of expected use include vision, operating model and governance. These elements are addressed through an analysis of the platforms’ features, the political economy of the industry in which they operate and documents like the platforms’ terms of service.

I conducted an analysis of the underlying vision of Slack through a critical examination of media articles about the platform or Slack Technologies. The media articles were obtained by running a search for the term “Slack” in the Factiva database. The search was limited to the 5-year period between 2015 and 2018. These media articles, and others to which they referred (New York Times, Wall Street Journal, Fortune and Times), provide insight into the
political economy of the enterprise software industry and allows for comparison with the political economy of the media in general. The governance element of the platform was analyzed by focusing on documents like the terms of service, user guides, privacy policy and other documents issued by Slack Technologies. These documents are published on the company website at www.slack.com.

I conducted a similar search for Microsoft Outlook and the articles collected thereby were analyzed for insight into the platform, Microsoft and the industry. The governance aspect of Outlook was addressed through an analysis of the Microsoft Services Agreement and other support material published on https://support.office.com/en-us/.

Both platforms’ technical features were analyzed on two levels. First as web applications and second as mobile applications. The second is particularly important since its situation on the mobile phone points to the mobility of workloads and the tendency for work to seep into non-work spheres and vice versa. The dual level of analysis is based on the possible differences in the mediator characteristics of the web and mobile applications. In this study, the mediator characteristics refer to attributes that signal how the applications set up the relationship between actors, and include the user interface arrangement, the textual content and symbolic representation (Light, Burgess & Duguay 2016).

My Slack and Outlook accounts formed the basis for a critical analysis of their technical features as they relate to work boundaries. I began from the process of account creation, moved through the sign-in process, on to the interface and alerts, imitating research in platform studies (Slater & Murray 2014). I recorded my observations as I interacted with the platform and drew connections between technical design and the political economy of enterprise software industry. Given the possibility that the platforms’ features and interface
may change because of updates, I intend to attach screenshots and dates to my recorded observations.

**Interviews**

To balance the technical focus of the software analysis, I employ interviews, which offer a human-centered narrative of work boundary issues. Although the analysis of the technical environment of collaboration platforms is very revealing, the study nonetheless requires workers’ perspectives for a complete representation of the experience of work boundaries in contemporary society. For insight into workers’ lived experience in the construction and navigation of work boundaries, I relied on unstructured interviews, which have the advantage of offering breadth and in-depth ethnographic information (Fontana & Frey 1994). In the case of this study, unstructured interviews with respondents encouraged them to be at ease and allowed me to observe how they used their phones and whether they checked for work alerts during the interview. The unstructured interview also allowed respondents to more easily broach contradictions between corporate policy on work boundaries and cultural practice among workers, a very important comparison in this study. I was concerned that a very structured line of questioning might appear like an interrogation, especially when inquiring about behaviors that potentially contravene corporate policy. This challenge with structured interviews underscores a major concern with interview research—power asymmetries between researchers and respondents. I expected that the fact that respondents are knowledge professionals and the unstructured nature of the interviews would minimize power asymmetries and lead to highly informative sessions. Nonetheless, I had to introduce some elements of structure to the interviews. To contextualize the interviews, I asked respondents the same background questions like education level, number of dependents and length of employment.
Unlike Hochschild (1997) and Turco (2016) who conducted ethnographies in particular organizations, this study is not situated within a specific organization. Rather, the pool of respondents was drawn from a variety of organizations, thus allowing for cross industry and cross job comparison. Interviews were restricted to white-collar workers in knowledge professions including researchers, lawyers, consultants and engineers in both large and small companies. Unlike other workers who may engage in primarily manual labor, knowledge workers—professionals in the information industry… possessing factual and theoretical knowledge to solve information and communicate the solutions to peers—are more likely to experience the kind of spatial, temporal and data blurs this dissertation studies. Disconnecting workloads from spatial constraints is easier where such workloads consist of information-based tasks rather than physical tasks that have to be completed within a physical office.

I preferred to schedule face-to-face interviews but resorted to phone interviews where follow-up questions with a previously interviewed respondent were necessary and in instances where respondents are unable to schedule face-to-face meetings. I noticed a strong preference for anonymity and all the respondents, except one, preferred the option to use pseudonyms. There was more variation in preferences for the use of specific names of their employers or general descriptions of the industry in which they worked. The specific names of the respondents and companies have little bearing to the objectives of the study so the preference for anonymity posed no drawbacks.

The participants were 30 US-based workers. 15 of them worked in Fortune 500 companies while the other 15 worked in smaller “start-up” type companies. They represented multiple levels in corporate hierarchy, ranging from individual contributors to managers and CEOs. Each participant held at least a college degree, with 70 percent holding
one or more graduate degrees. They held job titles like “counsel,” “engineer,” “director” and “researcher.” The respondent pool spanned across genders, age, marital and parent status. I recruited the participants in the study through a mix of convenience and snowball sampling. Knowledge professionals project images of being busy and gaining access to them for extended conversations about their work lives, as this study demands, required some connection to their networks.

The interview questions focused on understanding respondents’ background including education, work history, roles, managerial functions, team sizes, number of years spent in the company at which they are employed, the communication platforms used in their workplaces, respondents’ usage of such platforms, their philosophies of work and how their use of enterprise communication software aided or constrained their preferred work patterns.

**Road Map**

Consistent with the logic of smart regulation, which conceives of a multi-actor governance framework, each subsequent chapter spotlights an actor in the digital work environment and examines its influence on work boundary regulation. Chapter 2 focuses on government regulation of work. It discusses the legal aspects of work boundaries, arguing that existing legislation are dated and fail to appreciate the uniqueness of digital work. The primary focus is on time-based labor laws, the sort found in the United States. It distinguishes between task-based regulation found in agrarian ages and the time-based regulation characteristic of artisan and industrial societies. It identifies labor regulations and worker privacy law as the primary laws affecting the formation and negotiation of work boundaries. It examines the development of legislation and case law, revealing the underlying rationale for the various
legal positions on work boundaries. Here, a fragmented vision of work boundaries is revealed as between non-exempt workers (for whom the law imposes a 40-hour work week with exceptions that incur overtime pay) and exempt workers who are excluded from this vision of temporally bound work. This chapter also sets up the legal perspective on work boundaries against which workers’ actual practices, as mediated by digital technology, are later compared. It shows how labor related legislation fails to incorporate the reality of working in digital environments and case law adopts a very limited and largely unpredictable approach to cases relating to work boundaries in digital environments. The case of *City of Ontario v. Quon* where the Supreme Court expresses reluctance to make broad rules about digital technologies in the workplace is most instructive here. The chapter proposes that rather than think of digital work in the time-based manner of the 20th century factory work or the task-based manner of agrarian societies, digital work is better conceived as media-based and requires new regulatory approaches.

Chapter 3 focuses on corporate regulation of work. It examines employer perspectives on work boundaries as driven by incentives for corporate control, productivity and asset protection. It highlights the contrast between the tolerant nature of companies, in permitting reasonable non-work use, and the absence of a reasonable expectation of privacy in those non-work uses, arguing that this disconnect is detrimental to a contextual framework of analyzing worker privacy. The corporate approach inferred from textual analysis of corporate codes of Fortune 500 companies and interviews with workers in smaller companies skew towards limited integration of work and non-work. As the interviews reveal, workers, where possible, simply adopt their preferred and highly varied boundary management styles. Company type, corporate codes, workers’ family obligations, knowledge of company culture, privacy preferences, enterprise software interfaces and marketing
scripts, globalization trends, and employment precarity combine to inform workers’ perspectives and negotiation of the shifting and fuzzy boundaries of work.

Using interviews, chapter 4 focuses on self and peer regulation as practiced by workers. It explores various worker incentives for their preferred boundaries and actual boundary management practices given constraints of employer policies. In this chapter, the highly subjective experiences of workers are revealed and we learn about how family obligations, personal preferences, globalization, and perceived employment precarity compel workers to negotiate work boundaries in differentiated ways.

Chapter 5 examines the regulatory influence of an unlikely category of actors on work boundaries—the sales and marketing industry. It explores the phenomenon of online shopping; a non-work activity that respondents reported performing at work. It argues that the strategic delivery of marketing emails during work, alongside the scheduling of big sales events during work times, merges worker and consumer identities in ways that heighten privacy risks.

Chapter 6 focuses on tech companies’ regulatory power and argues that enterprise software companies strategically align their vision of work with employers’ to maximize profits. It examines technologists’ visions of work boundaries, using case studies of email and Slack. It shows how developers’ ideas of efficiency, collaboration and productivity underlie the design of enterprise software. While developers argue that the capacity to work in pleasant digital environments that transcend constraints of space and time promote quick completion of tasks, they fail to account for the expansion of work beyond traditional temporal constraints. The chapter treats collaboration software from two perspectives—as a product for enterprise communication, and as a platform for other enterprise applications. In the latter role, the software control application developers’ access to the work
environment. One way to understand enterprise collaboration software in its gatekeeping role is to think of it as the Apple iOS and other enterprise applications as the apps found in the App Store. This discussion of collaboration software and email highlights the political economy of the enterprise software space, a story that begins in a somewhat distinct manner than the usual account of oligarchy in the media space. Slack Technologies Inc., a new entrant into the media space achieved such an unanticipated level of engagement with its enterprise collaboration software (also named Slack) that media super powers like Facebook and Microsoft alongside other small companies released competing products. With the entry of giants like Microsoft and Facebook, the chapter poses the question whether it is simply a matter of time before the enterprise collaboration market mirrors the oligarchy of the larger media market. The chapter further examines the adoption of Slack in a company, Data-io, as evidence of the gap between work, as imagined and marketed by enterprise software developers, and as experienced by workers. The adoption case study grapples with themes of worker autonomy and corporate control, exploring both horizontal and vertical power interactions.

This dissertation concludes with the argument that employers and workers, driven by self-serving interests, hold varied and often incompatible views of work boundaries, with enterprise software companies and retailers taking positions that exacerbate the risk to workers. Perspectives from law (reflected in legislation and case law), technologists (mirrored by software design and terms of use), corporations (depicted in corporate codes) and workers (narrated in interviews) are hardly complementary. But to protect digital workers’ wages, privacy and health, these perspectives need to be reconciled. Beginning with an examination of how law and history have contributed to unshaped work and non-work
boundaries, this study contributes to the work of reconciling competing boundary perspectives on time, space and data.
Chapter 2

Laws of Work Boundaries

In July 2015, Fortune published an article, “Wasting Time at Work: The Epidemic Continues.” It only seemed fitting, if slightly paradoxical, that this magazine with its central role in the development of corporate liberal culture and its prominence in Noble’s Forces of Production would publish on the subject. The article, informed by surveys administered by salary.com and Harris Poll, recorded that 89 percent of employees wasted at least 30 minutes at work daily. At least 50 percent of time-wasting activities were attributable to communication technology – phone calls, texts, social media and Internet usage.

This “epidemic” was the very phenomenon Taylor sought to address with scientific management. Taylor (1911) made work pace the center of his management plan for improving efficiency in companies. He was convinced that workers were inclined to work slowly and proper management required eliminating 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 to workers, only the duty of execution according to detailed instructions and within the specified time limits. As Braverman (1998) noted, the fragmentation of labor process due to management methods of systematic management masquerading as scientific process did not flow from the development of workplace technologies. Rather, it was primarily a management method that adapted itself to available technologies, contravening arguments for technological
determinism. Taylorism’s three principles according to Braverman’s account were to (1) collate worker knowledge about the labor process for management purposes (2) separate “brain work” from physical labor (3) outline the process and specify the time allowed for task performance. Not that scientific management was wildly successful, as the Watertown Strike of 1911 showed, but Taylorism had its adherents. Some of these have persisted until the present day, especially in consulting. The growing phenomenon of time wasting that Fortune has recorded from 2012 until 2015 is therefore peculiar given the history of the disciplining of labor.

The legal provisions governing temporal work boundaries evolved from the social construction of work over time (Martorana & Hirsch, 2001). Accordingly, agrarian communities, instead of being governed by clock time, were task oriented and the concept of overtime was foreign to these communities (Thompson, 1967). However, with the application of time-measurement to work, it became necessary to demarcate employers’ time from workers’ time. Roediger & Foner (1989) observe that the rise of artisan work over agrarian work was the primary driver in pushing for the time restrictions on work. This historical development of the time-based regulation of work contrasts with the experience in England, where the introduction of time measurements to labor coincided with industrialization. In America, artisans’ primary argument for regulated work hours was the desire to engage in political participation that additional non-work hours would permit. With the rise of industrial work, work hours and overtime became central issues, resulting in strikes and demands for reduced work hours (Dublin, 1975). Over time, industrial firms joined workers in the push for work hour limits, based on research that associated reduced work hours with increased productivity (Hunnicutt, 1996).
“If work was to be a daily experience of helplessness... grueling and fatiguing then it had
to be reduced” (Hunnicutt, 1996). This quote signaled an attempt to distinguish between the
pace of preindustrial labor, which was largely self-driven and interspersed with non-work
activities and the intense focus of industrial labor. It suggests that less exhausting work
might have eliminated the “struggle against and about time.” Even if this was true during the
industrial period, it is unclear that workers that have largely adjusted to the time discipline of
work would be inclined to tolerate a change in logic, especially given the influence of the
disciplining institutions of the school and the church in promoting time discipline. Besides,
time formed the basis for wage measurement. The time discipline of work prevailed and the
conversation centered on the amount of time workers had to spend toiling. This struggle
about time united workers across the race, gender and skill, even though the wage outcome
may be different for each category.

One of the first organized strikes for reduced work time took place among Philadelphia
carpenters in May 1791. It was a response to employers’ tactics of paying flat rate wages in
the summer when work hours were longer and resorting to an output based wage rate in the
shorter daylight hours of winter. The strike, though unsuccessful set the stage for other
attempts to reduce the number of working hours. By the 1830s more organizing efforts
emerged. In Massachusetts for example, the workers demanded a reduction from a 13-hour
workday to 10 and eventually 8-hour work days. As expected, management was not receptive
to the idea and labor organizing started to take shape around the agitation for fewer hours.
Such organizing for regulating work hour ceilings was a marked contrast from earlier
regulations like the Statute of Artificers that included wage ceilings.

Government concern about working hours initially focused on child labor because the
12-hour workday that existed in Massachusetts made it impossible for child workers to
attend school. In addition to government concerns about child labor, isolated groups of workers organized strikes in various workplaces. These strikes often arose from reductions in time allocated for lunch and a consequent increase in working hours. Such strikes took place in cities of Massachusetts, Philadelphia, Rhode Island (where management sought to divide workers along gender lines by also reducing women’s wages) and New Jersey.

Ira Steward, a labor advocate, soon emerged as a strong proponent of the 8-hour workday. He began his labor activism with the Machinists and Blacksmith’s Union alongside the Boston Trades’ Assembly (Kuritz 1956). He soon left the Boston Trades’ Assembly and moved on to form the Labor Reform Association when the former failed to act on his proposals. Soon 8-hour leagues were formed across Massachusetts and mid-western states. Efforts of the activist groups and labor unions soon resulted in state and federal law defining the workday as 8 hours. The laws were nonetheless ineffective for curtailing long work hours because it was understood that employers and workers could negotiate for less or more than 8 hours of work per day. In the case of United States v. Martin, the Supreme Court held that the 8-hour statute did not preclude employers and workers from negotiating a 12-hour workday. According to Justice Hunt, who delivered the opinion of the court, the length of a workday was “a matter between the principal and his agent, in which a third party has no interest.”

The quest for the strong legislative support for the 8-hour workday continued but soon became entangled with the money reform movement seeking reduced interest rates on credit facilities. The integration prevailed until money reform trumped the subject of work hours. The shift in focus led Ira to form a new organization to pursue reduced work hours, specifically the 8-hour workday. (The importance of the specific duration of work demanded
was underscored by the existence of 10-hour agitators, particularly the Fall River Ten Hour Association.)

Ira’s logic was that an increase in leisure hours would lead to increased wages, which would somehow cause a shift to cooperative production, as workers would be less inclined to hire themselves out for wages (Steward 1865). The shift to cooperative production, according to Ira would result in the resolution of socio-economic problems arising from class disparities and low-income levels. To attain cooperative production, Ira thought “ragged” workers needed the opportunity offered by leisure time to shamefully reflect on, and become discontented with, their poor conditions of existence. According to him, more leisure hours would lead workers to socialize more and develop a taste for consumer goods owned by their peers, which would in turn drive up wages. It is not clear that many supporters of the 8-hour workday thought of the move as a cure-all for socio-economic problems. Rather, a myriad of personal reasons drove support for the expansion of leisure time. Nonetheless, the connections Ira made between work and consumption are relevant to understanding work boundary navigation and I probe this connection further in Chapter 5.

Despite the organizing efforts of labor unions and activists, it was not until the high unemployment levels from the depression that national regulation was introduced. Keynesian economists held the opinion that the cap on the maximum number of weekly work hours, alongside the imposition of premium wages for work hours exceeding the prescribed maximum, would reduce unemployment (Martorana & Hirsch 2001). The Department of Labor’s Overtime Rules under the Fair Labor Standards Act (FLSA) of 1938 underscore the importance of defining the scope of “work.” The rules required that employees receive no less than one and half times their regular rate for hours worked over 40 in a workweek. Some employees were exempt based on their duties and salary levels.
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). In 2015, a Notice of Proposed Rule Making (NPRM) was issued to revise the salary requirement up to $913 per week ($47,476 per annum). The overtime rules are however moderated by a de minimis rule, which renders negligible amounts of work non-compensable. The boundaries of work arise here to determine not just what qualifies for overtime pay but also what is too negligible to count as work for which remuneration should be received.

But the shift to an eight-hour workday was not the end of the debate on work hours. In an account of work hours at the cereal factory, Kellogg, Hunnicutt (1996) recounts that the Great Depression drove a reconsideration of the length of a work shift and an eventual change from three 8-hour shifts in a day to four 6-hour shifts. The largely optional 6-hour workday, which lasted about fifty-five years, was a case study for understanding worker motivations for time-bound work. Chief among the causes of the eventual return of all the workers to the traditional 8-hour workday was the incompatibility of extended leisure with masculinity and a puritan work ethic. “Feminization of shorter work hours” proved an easy and effective way to dissuade men from opting into the six-hour workday. Kellogg’s workers gradually returned to the 8-hour workweek until even the last holdouts, mostly women, gave up on the 6-hour workday in 1985.

The connection between identity and work is not restricted to gender. One of the earliest records of labor regulation in 17th century New England was influenced by the English Statue of Artificers. Unlike current labor legislation that emphasizes minimum daily wage for the protection of workers, this law, issued by the Massachusetts Court of Assistants in response to labor scarcity, set a ceiling on the wages that workers could demand (Tomlins 2010). The penalties for receiving wages in excess of the established maximum were soon
abandoned for less uniform approaches. But the capacity to restrain labor through laws remained clear and informed white workers’ efforts at distinguishing their employment from slavery and indenture. By the 19th century however, the distinction between servanthood in particular and employment had reduced to one of terminology. 19th century law books (Tomlins, 1993; Walker, 1837) equating master-servant relationship to employer-employee relationship contrast with the 18th century court decision in *State v. Higgins* holding that an employee was not a servant and employers were not superior to employees.

With the end of slavery, the master-servant relationship as a model for employment relations was a somewhat equalizing treatment across race and social status of workers. Equalization was not absolute as there were capitalist benefits to the exploitation of racial differences among workers. To provide evidence of an entrenched and historically derived formula for corporate exploitation of racial constructions, Roediger and Esch (2012) trace racial relations as far back as slavery and introduce accounts of race management in Panama. They employ Ernest Riebe’s cartoons in recounting the strategy of playing one race against the other to boost worker competition and output.

Biggs (1996) provides an account of the rationalism inherent of factory architecture, which renders the racial analysis of corporate management inchoate because of the apparent indifference of the design to skin color. Biggs made no account of any racial difference in the ability to handle factory work. In fact, with the fragmentation of tasks into simple repetitious movement, there was little reason to employ race management techniques. Roediger and Esch (2012) deal with the issue by acknowledging Taylor’s somewhat racist orientation against African-Americans but conclude by reiterating his focus on managing processes rather than races. As mindless and repetitious as the factory process was, the authors agree on the existence of a largely equalizing factory floor (p.150).
Similarly, Kwolek-Folland (1995) records that socially constructed gender roles, which were transported to the workplace, had implications for remuneration and informed gender specific categorization of positions. In a manner more fundamental than technology and factory architecture and perhaps only akin to race, the account of the gendering of business reveals the lasting effect of management strategies on workers’ self-perception leading to their voluntary adoption of self-descriptors like “business girl” and “office wife.”

In summary, outside of formal laws, there were various social constructions about worker identities that played a role in the regulation of work. According to these accounts, alongside union efforts and the development of formal laws, worker identities, particularly racial and gender constructions shaped work boundary management. I explore this subject of identity further in the worker section of this study.

**Time measurement, worker hierarchies and the FLSA**

Although it perpetuates worker hierarchies, the FLSA does not provide a definition of work and the resulting challenge with clarifying the meaning of work is not restricted to the legal realm alone. In fact, the ambiguity of the concept stems from its contextual variation. The definition of work is influenced by the social and historical context in which it is being discussed. Fuchs (2014) focuses on digital work, Gregg (2011) on knowledge work, and Hochschild (1979) on emotion work. In addition to identifying the specific context in which the term work is being employed, there have been attempts to distinguish the term from labor, sometimes as a mere signal of the historical development of both terms (Williams, 1985), and at other times as a theoretical basis for expounding on the digital age (Fuchs, 2014). Both accounts of the distinction define work as activity in a general sense and agree that labor is a type of work that signifies “alienation” and “toil” (Williams, 1985, p. 335).
Nonetheless, this study adopts the use of the term work as paid employment, a usage Williams (1985) ascribes to the development of “capitalist production relations.” In describing work as paid employment, traveling from home to work, performing household chores, consuming media, and by extension advertising—described by Smythe (1977) as “audience labor” and for which workers are not paid—are excluded from the definition of work. Their exclusion is not designed to challenge Marxist and feminist arguments that such activities are labor but is based on the need for a clear dichotomy between paid work performed in the context of a contractual relationship and other activities, which may be labor but are not remunerated.

Despite these varied definitions of work, labor cases required a specific definition of work. In response, the Supreme Court offered a definition of 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” (Tennessee Coal Iron & R.R v. Muscoda Local). Despite this broad definition, the Portal to Portal Act exempts from compensable working time under the FLSA, “activities which are preliminary or postliminary to” the performance of the principal activities that an employee is supposed to perform. Principal activities are in turn “integral and indispensable” (Steiner v. Mitchell).

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. 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 (Steiner v. Mitchell). However, security screenings undergone by warehouse workers to prevent theft was considered non-compensable under the FLSA. The Supreme Court reasoned that in the case of the workers in contact with toxic materials, showering and changing clothes was
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—retrieving items from warehouse shelves (Integrity Staffing Solutions v. Busk).

The significance of the definition and classification of work is tied to compensation. Workers can make complaints to the Wage and Hour Division (WHD) of the Department of Labor, which conducts compliance actions to recover unpaid wages and overtime. In 2018, the WHD recovered $194,203,854 in overtime for 217,884 violations, up from $119,215,069 for 175,496 violations in 2009 (United States Department of Labor, 2018). In particular, some of the violations resulted from the treatment of certain activities as non-work. In 2008, the most recent breakdown of back wages figures that over $12 million of the back wages recovered were the result of a misclassification of duties under exempt categories for executive employees. The numbers show a tension between workers’ conception of the type of work they do and employers’ preferred interpretation for compensation purposes.

A judicial response to this tension, especially as it relates to small amounts of work was resolved in favor of employers through the development of the de minimis doctrine. Under the doctrine, small amounts of work that ordinarily merited compensation under the FLSA were regarded as too insignificant to compel payments. According to the Supreme Court in Anderson v. Mt Clemens Pottery Co. (1946):

When the matter in issue concerns only a few seconds or minutes of work beyond the scheduled working hours, such trifles may be disregarded. Split-second absurdities are not justified by the actualities of working conditions or by the policy of the Fair Labor Standards Act. It is only when an
employee is required to give up a substantial measure of his
time and effort that compensable working time is involved.

In *Linaw v. United States*, (1984) the court enumerated more specific grounds for identifying *de minimis* work as: “(1) the practical administrative difficulty of recording the additional time; (2) the aggregate amount of compensable time; and (3) the regularity of the additional work.” The first rationale is one that is now easily solved in the case of knowledge workers using digital media technologies for work. As observed in the more recent case of *Troester v. Starbucks* (2018), technological advances can help in tracking small amounts of time. Specifically, in the context of this study, the shift to digital environments of work can lend accuracy time measurements, even to the fraction of a second. This possibility may appear more useful for non-exempt workers since their remuneration is tied to the number of hours worked and they also qualify for overtime. For exempt workers however, the utility for precise measurements of work time is for personal tracking and possibly employer attempts at conducting a time-based productivity assessment.

The classification of work along exempt and non-exempt lines enunciates the divide between blue collar and white-collar workers, since the former were generally eligible and the latter were typically exempt (Bourdieu 1980). The applicability of the FLSA is more nuanced than the simple distinction between blue collar and white collar. According to section 13(a)(1) of the FLSA, employees performing executive, administrative, professional and outside sales duties are exempt from minimum wage and overtime requirements of the FLSA. There is a level of pedigree associated with exempt employees such that some workers preferred to be classified as exempt despite having to forgo overtime pay (Martorana & Hirsch 2001). The logic for exempting certain employees from the overtime requirements of the FLSA was based on the presumption of higher relatively fixed pay and
autonomy accruing to these exempt professionals. In reality however, some exempt workers were no better off financially than the non-exempt workers. Nevertheless, classification as an exempt employee remained a status symbol (Martorana & Hirsch 2001).

Independent contractors form another class of workers, separate from exempt and non-exempt categories. The minimum wage and overtime provisions of the FLSA do not cover independent contractors. They are also excluded from the protections of other labor protections like prohibition against discrimination on the basis of race, color, religion, sex or national origin (Title VII, Civil Rights Act 1964), prohibition against age discrimination (Age Discrimination in Employment Act, 1967), family and medical leave (Family and Medical Leave Act, 1993) and the right to unionize (National Labor Relations Act, 1935). Employers are also under no obligation to pay or deduct taxes and social security payments on behalf of independent contractors, which is an obligation for workers in the employee category. Therefore, employers have an incentive to classify workers as independent contractors rather than employees.

Like other large corporations, Microsoft attempted to take advantage of the independent contractor label by hiring freelancers to work as independent contractors, resulting in the case: Vizcaino v. Microsoft Corporation (1996). Although the freelancers had been hired to work on specific projects and signed agreements specifying that they were independent contractors, they worked under the same conditions as employees. However, Microsoft did not withhold taxes from the freelancers’ checks, nor did it enroll them in the company’s pension plans. Upon investigation, the IRS reached a determination that the freelancers were in fact employees. Microsoft converted the independent contract agreement to employment agreements for some of the freelancers and dismissed the others. The dismissed workers then sued for inclusion in the company’s pension plans. After an unsuccessful appeal of the
District Court’s decision to include the dismissed workers in the pension plans, Microsoft settled the case for about $97 million.

To determine whether a worker is an employee or an independent contractor, courts generally find the agreed worker title unpersuasive and have evolved judicial tests including control over the details of work, engagement in other projects besides those of the employer, supervision, skill, provision of work tools, period of employment, basis for payment, level of integration of projects into the employer’s daily business, the intention of the parties and the level of distinctiveness of the contracted work from the business of the employer. In essence, employees are expected to be subject to the control of employers in the performance of their duties while independent contractors have autonomy over the performance of their work, are expected to provide their own work tools and generally maintain a line of business distinct from the businesses of preferably multiple employers.

Disputes over worker classification and the consequent applicability of the FLSA indicate an employer preference for avoiding regulatory protection of worker welfare and instead leaving the matter of payment and benefits to the market, where companies are more likely to assert more power. This state of affairs highlights the importance of government regulation in the management of work boundaries. The FLSA is particularly relevant to ensuring that at least for certain categories of workers, the temporal boundaries of work—40 hours per week—are breached at the risk of overtime payments, thereby creating an awareness of the aspirational constraints of work in society.

_Digital environments_

The shift to digital work environments presents a challenge to the vision of work boundaries espoused in the FLSA. The performance of work using digital media creates a gap in labor
regulation because it is unclear how the existing labor rules on work hours should apply to technology designed to transform work from activities performed in physical sites to virtual activities. With the widespread use of electronic communication for work and non-work activities the capacity to achieve a separation between both spheres cannot be taken for granted. In fact, with policies that permit and sometimes require employees to use their personal devices for work, it requires more of an effort to engage in a policy of separating work from non-work than to engage in a policy of integration. In fact, technology opinion writers treat two-device users as mavericks, covering them in articles such as “People for Whom One Cellphone Isn't Enough” (Holmes, 2014).

Despite the widespread integration of work and non-work, legislation, case law and legal scholarship on the subject is limited. Isolated consideration of the subject include an exploration of the possible legal arguments for the application the FLSA to the conduct of work on smartphones (McLaughlin 2010) However, the implication of porous boundaries for the enforcement of the FLSA are clear—there are financial implications for the placement of work boundaries. Narrow definitions of work exclude activities that ought to be compensated while broad ones would capture as compensable work, activities that are negligible.

The treatment of workers while they are on-call is perhaps the closest analogue to the easy accessibility to work that has fast become a feature of the 21st century. Department of Labor regulations indicate that employees 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 are considered to be working. In contrast, employees that are merely required to leave information about their whereabouts are not working while on call (§785.17). The 7th circuit qualified this distinction between being on call while on the employer’s premises and being
on call while only leaving details about one’s whereabouts by explaining that the latter may be compensable if employees are called to work so often that they are unable to use their personal time effectively (Dinges v. Sacred Heart St Mary’s Hospitals).

The time-related themes discussed in this section continue to reoccur through the rest of the study. First, there is the dichotomy between time-based and task-based work. The account of the eventual passage of labor law restricting work hours highlights the shift from time-based work to task-based work. The tension between the two was highlighted in the contrast between fixed daily wages and payment per piece among Philadelphia carpenters in the 18th century.

There is also the inevitable conflation of work hour reduction with larger labor and economic policies. Among them are minimum wage concerns and money reform as described in earlier sections of this chapter. Some of these issues identified in the earlier account of Ira Steward’s labor activism experience persist until now, even if the specifics of the conversation have shifted. For instance, conversations about minimum wage have not challenged the length of the workday but have included concerns about health insurance as well.

Finally, the history of the push for reduced work hours began in a largely artisan based labor society but federal labor law focused largely on industrial labor and now, labor in the information economy. Not all labor in the current information economy is performed by knowledge workers though. Rather, the point is that the formulation of labor law, based on a time-based approach to work, is more neatly applied to the types of jobs classified as blue collar, often found in factories and at lower levels of organizational hierarchy. However, knowledge workers are often classified as exempt from the rules governing work hour limits. Even when they are not, the application of labor law to knowledge is somewhat inapposite
because of the transcendent nature of such information-based jobs and the proliferation of mobile technologies for work.

**Mediated Labor and Data Privacy**

Time is not the only resource implicated in the definition of work boundaries. This section shows how workers’ personal data can be drawn into the work realm as well, with serious implications for privacy. Notably though, the privacy risks identified in this section are traceable to fuzzy spatial and temporal boundaries thus indicating the interconnectedness of boundary dimensions.

The evolution of labor regulation partly considered in the preceding section points to a dependence on time and space for forming boundaries. This dependence is also evident in everyday speech in which expressions like workplace and work hours have taken root. Despite shifts in technology for performing work, terms for discussing work have not quite evolved. Rather, metaphors from dated sociocultural understandings of work have come to inform current thinking and attempts at situating conversation in modern practices of work can be made with the frequent mention of the adjective “digital.”

“Digital,” which the Oxford Dictionary describes as relating to “signals or data” or “computer technology,” is best understood in the context of materiality where non-digital objects possessed a type of tangibility that digital objects kept hidden behind 0s and 1s. Scholars like Mosco (2014) laboriously unearth the devastatingly extensive material existence of the digital in power-guzzling cloud servers and extensive environmental waste. By extension, digitally mediated work is affected by a seeming disconnection from the physical with an attending transcendent effect capable of hiding the real cost of work. But separation from the physical is unreal, as tangible machines in physical spaces support digital platforms
to which workers are dedicating large amounts of time. Crary (2013) captures the phenomenon in his description of the modern work environment as “a 24/7 environment [that] has the semblance of a social world but is actually a non-social model of machinic performance and a suspension of living that does not disclose the human cost required to sustain its effectiveness.”

Digitally mediated work environments rooted in the suspension of time and space constraints exacerbate the problem of bounding workers’ non-work data and keeping it out of the workspace. Because non-work activities are also performed in digital environments, workers can simultaneously perform work and non-work, moving data from one context to the other. For instance, workers can check their personal emails, social media accounts and banking information while on corporate equipment and networks. Similarly, they can access their workspaces from personal devices. The effect is a higher risk of exposing confidential personal information to corporate surveillance thereby threatening worker privacy. Despite the qualifier, worker privacy is not divorced from the idea of privacy in general. In fact, this dissertation puts forward the additional argument that worker privacy is intertwined with the more popular consumer privacy.

The subject of privacy has been addressed in various court cases based on constitutional provisions, statutes and case law. Constitutional analyses of privacy are based on the Fourth Amendment, which protects individuals against unreasonable searches and seizures by the government. The requirement for state action takes non-government employees out of the realm of work-place protection implicit in the text: “The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no warrants shall issue, but upon probable cause, supported by oath or
affirmation, and particularly describing the place to be searched, and the persons or things to be seized.”

Despite the focus on government violations, which are outside of the scope of this study of private employees, judicial interpretation of the Fourth Amendment is useful for understanding the elements of privacy claims. Justice Harlan’s concurrence in *Katz v. United States* expounded on the notion of privacy derivable from the fourth amendment (1967). The concurrence explained that an individual making a phone call in a telephone booth has a reasonable expectation of privacy in the conversation. This reasonable expectation of privacy is the standard by which privacy cases are analyzed under the Fourth Amendment. The standard can be difficult to apply in cases where it is debatable whether the expectation of privacy was reasonable or not. For instance, *Florida v. Riley* 488 U.S. 445 (1989) reveals the problem that is encountered with the application of the standard. The respondent in the case grew marijuana in his home and after a tip off; the police inspected the respondent’s property from a plane flying 1000 feet in the air. Although the court held that the respondent had no expectation of privacy, it would be curious for the respondent to have envisaged that any member of the public would just happen to fly above his property and notice the growing marijuana. Cases like this arguably contract the boundaries of reasonable expectations. But subsequently, knowledge of the decision makes it unreasonable for people in similar circumstances to allege a reasonable expectation of privacy.

In employee privacy cases, the employee’s reasonable expectation of privacy, if one exists, is balanced “against the government's need for supervision, control, and the efficient operation of the workplace” (*O'Connor v. Ortega* 1987). The reasonableness of an employee’s expectation of privacy can be analyzed by determining whether there was implied consent created through notice. In *US v. Simons* (2000) the court held that Simons, an employee of
the Federal Bureau of Information Services, a division of the Central Investigation Agency had no reasonable expectation of privacy in his Internet use because of FBIS’ clear policy of monitoring employees’ Internet use. In essence, if Simons was averse to the policy and thought his Internet activities should be private, he should not have remained in FBIS’ employment. Similarly, in State v. Francisco (1989) the court held that a narcotics detective had “contractually agreed” to the terms of the Sheriff Department Policy that there was no expectation of privacy in the departmental vehicles. Hence, when the detective brought a motion to quash evidence of cocaine found in the departmental car assigned exclusively to him, the court ruled that he had no expectation of privacy.

These cases highlight the crucial role that contracts and notice play in the analysis of employees’ reasonable expectation of privacy. In these cases where the alleged privacy violation was in furtherance of a criminal investigation, there appears to be justification for employers’ actions. It is debatable whether the rationale for the decisions should have been situated in the realm of contract because it is impractical to suggest that either Simons or Francisco consciously took note of the policy and with complete understanding of its consequences, agreed to it. A stronger case for a recourse to the contract and consent rationale can be made absent a reality of the dire consequences of unemployment. However, considering studies that show a general ignorance of the content and consequences of the disclosures in privacy policies, there is little argument for informed as opposed to constructive notice or assumed consent.

The history of the development of case law relating to employee privacy in digital communications has been skewed in favor of employer monitoring rights. In one of the earliest cases relating to employee privacy in digital communication, Bourke et al v. Nissan Motor Corporation (1993), the plaintiffs sued for wrongful termination and invasion of privacy
by their former employer, Nissan. The plaintiffs had engaged in communications of a personal (sexual) nature over the company’s email system. Upon discovery, they were issued warnings and subsequently scored low performance ratings leading them to file complaints of privacy invasion with the human resources department and eventually resulting in the termination of their employment. Although the plaintiffs argued that they had a reasonable expectation of privacy in their email communications because the company advised them to safely secure their passwords, their claim failed. The company argued that there was no reasonable expectation in employee email communication at the company because the plaintiffs signed a computer use agreement that specified that company devices and software were to be used for work related purposes. The company further argued that the plaintiffs had been informed by their colleagues that other individuals, besides the intended recipients, were able to access and read emails sent on the company network. The court dismissed the suit, holding that the plaintiffs had no reasonable expectation of privacy in email communications sent over the company network.

It is important to note that the Bourke case was heard in California, one of the few US states that have constitutions stating an express right to privacy (other states include Alaska, Arizona, Florida, Hawaii, Illinois, Louisiana, Montana, South Carolina and Washington). It was not surprising that in 1996, based on Pennsylvania law which offered no constitutional right to privacy, the court in Smyth v. Pillsbury held that employees had no reasonable expectation of privacy in email communications with other employees over the company network, even if the company had made earlier representations that it would not monitor such communications. In 1999, the Texas Court of Appeal, went further to hold that no reasonable expectation of privacy exists in employee created personal folders secured by passwords (McLaren v. Microsoft).
Despite the recognition of privacy as a constitutional right, California courts acknowledge the capacity of employees to execute contracts waiving their privacy rights. In *TBG Insurance Services Corporation v. The Superior Court of Los Angeles County* (2002), the court held that Mr. Zieminski, an employee could not sustain a claim for privacy invasion when his employer gained access to his home computer, since he had voluntarily relinquished his privacy rights by signing a waiver to that effect. When analyzing cases involving consent, courts could decide issues based on alternative rationales. For instance, the court in *TBG* could have premised the decision on the employer’s property rights, on the clear instructions to Mr. Zieminski to use the computer for business purposes only and also the availability of alternatives to using the employer’s computer. Hence, the crux of the matter did not have to be that Mr. Zieminski signed the terms of the employer’s advance notice “and had the opportunity to consent to or reject the very thing he now complains about.” Whether or not Mr. Zieminski agreed with the terms; he probably would have signed them to protect his employment.

In more recent times, cases about employee privacy have turned on the underlying technology policy in the relevant employing organization. Despite the vagueness that may sometimes accompany company policies on the use of communication technologies, general policies for the use of communication devices fall into three broad categories: *Bring Your Own Device*, *Company Owned Personal Enabled* (COPE) and *Company Issued Business Only* (COBO). As the descriptions suggest, these policies are based on ownership and permitted use. The first category is owned by the and can be used for both company and personal activities. The second category is owned by the company but can be used for both company and personal activities, while the third is owned by the company and its usage is
restricted to work activities. The following grid shows the distribution of the policies according to ownership and permitted usage:

Table 1. Device Ownership and Permitted Use

<table>
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<th>Device Ownership</th>
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<tr>
<td></td>
<td>Company</td>
</tr>
<tr>
<td><strong>Permitted Use</strong></td>
<td></td>
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<tr>
<td><strong>Work</strong></td>
<td>COBO</td>
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<tr>
<td></td>
<td>COPE</td>
</tr>
<tr>
<td><strong>Personal</strong></td>
<td>COPE</td>
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</tbody>
</table>

BYOD, alongside COPE are the primary device policies at the center of the blurring boundaries between work and personal spheres. BYOD policies in particular have garnered more attention. These policies have recorded high rates of adoption across many sectors with the public sector and healthcare recording the highest use of personal smartphones for work (Hewitt et al, 2018). This shift, rather than indicate a movement away from the comingling of work and personal activities, indicates a movement away from express policies governing the comingling of work and personal activities. The reason lies in employees’ tendency to use their personal devices for work regardless of express permission. As such, some companies’ movement to BYOD was more in response to an already existing pattern of employee behavior rather than an attempt to introduce a novel device policy.
It has gradually become popular among modern firms, replacing or complementing the long existing tradition of employer provided devices. In 2012, employees bought about 80 percent of the smartphones and 67 percent of the tablets used for work indicating a preference for consolidating their work and personal activities in one device (Ellis, Saret & Weed 2012). Moreover, there are assertions that the adoption of BYOD policies increases employee productivity. Combined with the reduction in the budget for the purchase of devices, it is considered a mutually beneficial system to both employees and employers. (Andersson, Kaplan & Smolinsky, 2012). Despite the rise in BYOD policies in the private sector, at least in 2013, BYOD among government workers never really took off (Pelino et al, 2015). While other sectors saw a rise in BYOD interest from 19 percent in 2012 to 44 percent in 2013, interest in the government sector recorded a 2 percent decline. In 2014, government sector interest in BYOD fell a further 6 percent plateauing at 11 percent while other sectors recorded a 14 percent decrease. The kinds of government workers interested in BYOD however provide some insight to its worker appeal. They include high level executives, temporary employees like ad hoc census workers, workers engaging in administrative tasks, teleworkers and emergency response personnel. Forrester reports that this is consistent across non-government sectors. This varied interest across different types of employees underscore the notion that blurring of boundaries are a function of identity.

A much lower government sector interest in BYOD, at least prior to the 2018 report, can be explained by twin concerns of privacy and security. Hilary Clinton’s server story serves as a perfect example of the kind of security concerns associated with government information. Government IT personnel are concerned about the ability to ensure security of classified information under a BYOD system, and rightly so, given the list of risky activities employees reportedly engage in on their devices (Statista, 2013). Employees are also concerned about
the privacy of their personal information, alongside union concerns about the dividing line between work and life (Statista, 2013).

Despite these reservations about BYOD, the White House, recognizing the peculiarity of BYOD issued guidelines to agencies considering the implementation of the system. Notably, the privacy policy for government-issued devices informs employees that they have no reasonable expectation of privacy in the use of the devices while the privacy policy for BYOD assures employees that the privacy of their personal data would be respected (White House report n.d.)

Closely related to the technology infrastructure of modern organizations is cloud computing, another IT policy that has implications for the blurring boundaries between work and personal spheres. A cloud is datacenter hardware and software that provides computing services and can be accessed via the Internet (Armbust et al 2010). A cloud may be public – available to members of the public in return for payment, or private- restricted to the internal use of a specific company. The service models include: Software as a service (SaaS)—consumer's capacity to use the provider's applications running on a cloud (Google apps, Dropbox, OneDrive, Office 365); Platform as a service (PaaS)—capacity to deploy into the cloud, applications created or acquired by the consumer using programming language supported by the provider; and Infrastructure as a service (IaaS)— capacity to provision fundamental computing resources including processing, storage and network resources on the cloud.

An organization operating a BYOD policy in a cloud environment is getting its workers to access data and computing resources through their devices without situating the data or resources in their devices. On some level, the fact that data is not necessarily housed in the devices offer companies some level of data security but the access such devices grant to
holders is hardly reassuring. As such, workers are often required to sign agreements that allow their companies to remotely wipe corporate information and application from their phones. In the same vein, some companies elect to install monitoring systems on these worker-owned devices, leading to risks of intrusion on the personal data and location of workers.

Courts have not determined the privacy implications of a BYOD system. Nonetheless, there are indications that the system portends significant implications for employee privacy, most importantly because of its distinguishing feature of consolidating employees’ private data and employer data on the same device. One may argue that employees have more valid claims of a reasonable expectation of privacy in devices under BYOD because employers should have no access to employees’ personal property. This argument rests on the presumption that employers made no financial contribution to the purchase of the device and have no ownership rights to it. Missing from the argument are nuances introduced by a variety of factors including the existence and dissemination of a privacy policy explaining the implications of the BYOD system; the surveillance norms developed over time in the course of the employer-worker relationship regarding BYOD and of course, the effect of pre-existing case law and statute on the BYOD system.

An employer with a privacy policy possesses the opportunity to educate employees about monitoring and data collection policies on employer-issued devices, providing employees with a valid basis for forming reasonable expectations of privacy or otherwise. According the court in Lazette v. Kulmatycki, the wordings of a privacy policy should be clear and absolute when an employer wishes to impress on employees that they have no reasonable expectation of privacy; since privacy policies that permit limited employee use of company devices
suggest that an employee may reasonably have an expectation of privacy in the use of a company device under certain circumstances.

In the same vein, where there is a policy stipulating that the employees have no reasonable expectation of privacy in their communications over the company device, then an employee cannot reasonably possess an expectation of privacy (Holmes v. Petrovich). In Holmes, the court held that it was unreasonable for an employee to have any expectation of privacy having been informed that the company computer was to be used for company business only and further that emails sent on the company computer were not private. Conversely, where the policy does not contain an absolute prohibition of all personal communications on the company computer but permits occasional communication, the employee may possess a reasonable expectation of privacy especially where the issue affects attorney-client communications that takes place via the employee’s “personal, password-protected, web-based e-mail account” (Stengart v. Loving Care Agency, Inc.).

Where there is no privacy policy or similar agreement governing the expectation of privacy in the integrated use of a device for work and non-work, a review of court cases indicate that other factors the courts may consider include: whether the communication at issue is covered by attorney-client privilege; whether the employee used personal web based accounts to communicate; and whether the employee saved account passwords on the employer-provided device.

*Whether the communication at issue is covered by attorney-client privilege:* The reasonable expectation of privacy that underlies attorney-client communications is not absolute when such communications are conducted over an employer issued device. Considerations of the policy value of preserving the attorney-client privilege arise only where there is no privacy policy, warning employees of the lack of privacy inherent in the use of company issued
devices, or there is permission to conduct personal communications over such devices. This distinction between an absolute determination of a reasonable expectation of privacy in all cases of attorney-client communications, and an analysis subject to the existence and contents of the privacy policy covering communications over the particular employer issued device in question is the basis for the different holdings in *Holmes* and *Stengart*. In *Holmes*, Petrovich Development Company LLC’s privacy policy expressly proscribed the use of company devices for personal communications, stating categorically that there was no privacy in personal emails. Holmes nonetheless engaged in an email exchange with her lawyer over the company computer and lost her claim that she had a reasonable expectation of privacy in the emails. In *Stengart*, despite providing that emails were not private to employees, the policy went on to permit the “occasional personal use” of company devices. As a result, the court considered the policy ambiguous and held that Stengart had a reasonable expectation in her communications with her attorney over the company device. As such, despite the privilege attached to the attorney-client communications, an employee may have no expectation of privacy in them because of the overriding effect of privacy policies.

In contrast with the reasoning outlined above, the court in *Stengart* emphasized that “because of the important public policy concerns underlying the attorney-client privilege, even a more clearly written company manual … would not be enforceable.” The court in *Holmes* was not inclined to address the *Stengart* court’s comment in this regard and instead distinguished the case on the basis that Stengart’s communications were clearly marked confidential and were sent from a “personal, password-protected, web-based e-mail account.”
The court in *Holmes* correctly refused to adopt the reasoning that attorney-client privilege always creates a reasonable expectation of privacy in attorney-client communications over company-issued devices regardless of the established privacy policies of such company. Such reasoning fails to account for employees’ duty to take reasonable steps to ensure the confidentiality of their communications with attorneys and fails to consider that employees may be said to have waived the attorney-client privilege where, despite knowledge of the company policy of monitoring communications, they proceed to engage in otherwise privileged exchanges with their attorneys over company-issued devices (*Trilogy Communications, Inc. v. Excom Realty, Inc.*).

**Whether the employee used personal web based accounts to communicate:** In *Stengart*, the court held that the employee’s use of a “personal, password-protected, web-based e-mail account,” though on a company device, nevertheless contributed to a finding of a reasonable expectation of privacy. Similarly, in *Lazette*, the employer’s policy permitted employee use of company issued blackberry devices for personal email. Accordingly, an employee used her company issued device for her personal Gmail account. Upon termination of her employment, she attempted to delete, and in fact thought she had deleted her personal email account before returning the blackberry to the company, suggesting to the court that she had a reasonable expectation of privacy in the content of her emails.

**Whether the employee saved account passwords on the employer-provided device:** The use of personal web based accounts alongside refraining from saving passwords to personal accounts on company issued devices may suggest that the employee took reasonable steps to keep her communication confidential. But with decisions like *McLaren v. Microsoft*, this consideration, which arguably suggests an expectation of privacy, may not hold much weight.
Legislation on Employee Data Privacy

In limited cases, employee data also enjoys the protection of statutes such as the Wiretap Act, which prohibits the interception or disclosure of contents of any wire, oral or electronic communication. The question of employee consent resurfaces here as well, because the statute provides exceptions where one of the parties to the communication has given consent. Another relevant statute is the Stored Communications Act, which makes unauthorized access into a facility through which electronic communication is being provided an offense. The provision was invoked in Pietrylo v. Hillstone Restaurant Group, where managers of a restaurant gained unauthorized access into a chat room created by an employee on MySpace by demanding the password of another employee and member of the chat room. Although the employee provided her password to the managers, the jury found that there was no authorization because the employee was concerned that she would get into trouble if she did not provide the password and because the managers continued to access the site despite knowing that the employee was uneasy about providing her password. By qualifying “access” with “unauthorized,” the statute highlights consent so that a court seeking to enforce the statute would have regard to any existing contracts, whether express or implied, between the employer and the employee that may signify consent. In essence, the statute can only be applied after the question of consent has been resolved, making contract law essential to the enforcement of the statute. The analysis of the voluntariness of the employee’s consent shows an understanding of workers’ precarious position and how superficial assent to employer conduct is not indicative of true agreement.

In addition to these federal statutes affecting employee privacy in the use of electronic media, some states have attempted to pass laws restricting employer access to workers’ personal information, particularly on social media. §11-2-124 of the Arkansas Code prohibits
employers from demanding workers’ social media usernames and passwords; directing them to alter their existing privacy settings; or requesting that they connect with other co-workers or supervisors. The law further prohibits employers from using social media login information they may have obtained through workers’ integrated use of electronic devices for work and non-work. §980 of the California Labor Code contains similar provisions as the Arkansas Code, including a rule prohibiting asking employees to access personal social media in the presence of the employer. Vermont law offers similar provisions with exemptions carved out for applicants to law enforcement positions.

One of the biggest challenges to the pursuit of employee privacy is the prevalent at-will employment. Absent an implied or express agreement to the contrary, employment subsists at the will of the employer. “An employee without a contract for a fixed term could be hired or fired for any reason or no reason at all” (Rothstein 1991). Similarly, in Payne v. Western Atlantic Railroad Co., the court emphasized the freedom of men to “discharge and to retain employees at will for good cause or for no cause, or even for bad cause without thereby being guilty of an unlawful act per se.” As a result of the continued application of this doctrine, many at will employees are dissuaded from objecting to their employers’ demands, because of the fear of termination.

Isolated judicial attempts to reconcile employee privacy with the doctrine of at will employment have not met with success. In Rulon-Miller v. International Business Machines (1984), the court held that the employee whose employment was terminated by IBM had a right to privacy created by IBM's policy to respect employee privacy. This attempt to create implied contracts of privacy, good faith and fair dealing was rejected in Foley v. Interactive Data Corp (1988) and Guz v. Bechtel Nat. Inc. (2000), further shoring surveillance powers of employers.
Conclusion

This section has highlighted some salient issues about government regulation of work boundaries by treating the subject in two broad categories—labor law, which governs the separation of work time from non-work time, and employee privacy law, which governs the separation of work data from personal data. It is noteworthy that the language of the law indicates a focus of employees as opposed to workers in general, highlighting the different types and hierarchies of workers. Moreover, there is no acknowledgement, by labor legislation, of the evolution of work from one, largely situated in physical space, to one capable of being performed as a virtual activity. In addition, the definition of work does not expressly mention the use of new media technologies, indicating that specific cases involving the use of these technologies may have to be litigated for clear rules to emerge. Finally, case law on employee privacy skew in favor of employer rights to monitor workers’ use of digital media, especially when there is a corporate policy providing workers notice of such monitoring.

But cases like City of Ontario, California v. Quon, (2010) reveal judicial hesitation in making broad rules about expectations of privacy when digital media devices capable of blurring the boundaries of work and non-work are used. The Supreme Court, recognizing that the affordances of new media and reasonable expectations regarding their usage have evolved over the years, has refrained from making a broad ruling about the privacy expectations enjoyed by employees in the use of employer-provided communication devices. The court reasoned that there was an unacceptable risk of error in ruling on privacy expectations of employees in electronic communications before the societal role of such media is clear.

The rest of this study is informed by the court’s hesitation in Quon. It contributes to the project of clarifying digital media’s societal role by examining their impact on work
boundaries. Relying on the peculiar power structure of the employment relationship and the incentive-driven corporate alliances formed by employers, technology companies and retailers, it problematizes the exculpatory use of consent in resolving issues of data, time and space boundaries of digital work. In particular, the next chapter shows how companies have leveraged the gaps in legal regulation of digital work to impose their own boundary policies.
Chapter 3

Encoding Boundary Lines

“Your private life is very much your own. Nonetheless, as an IBMer, your activities, both on and off the job, can affect IBM’s reputation and business interests.”

IBM

This chapter shows how the law’s failure to tackle the specificities of digital work has given employers significant latitude to define work boundaries using self-serving policies. It addresses employer perspectives on work boundaries and shows how productivity, confidentiality of corporate data, and worker monitoring are at the core of corporate regulation of work boundaries. Through an analysis of the corporate codes of 100 randomly selected Fortune 500 companies, it highlights how employers use policies in corporate codes as a tool to maintain control of integrated spheres of work and non-work. The chapter also examines the legal implications of boundary policies, particularly the threat to worker privacy, and recommends theoretically informed approaches for minimizing privacy risks in integrated digital environments.

Policies defining and regulating work boundaries are included in corporate codes, authored by employers for an intended audience of workers. For instance, IBM speaks in the first person and addresses its workers as “you.” The codes not only outline the rules for governing work boundaries but also provide justification for those rules. Some of the
corporate codes considered in this study tie boundary questions to productivity, suggesting that policies about constructing and navigating work boundaries are informed by efficiency concerns. Liability for worker actions also underlies some of the policies, which specify that illegal and inappropriate non-work material should not be accessed using corporate resources. Other justifications for the policies on work boundaries include the need to confine corporate data within the work environment for protection from competitors.

**Corporate Codes**

Although there is little consensus as to the effectiveness of corporate codes in shaping worker behavior (Schwartz, 2001), they are nonetheless regarded as an element of discursive practices in corporations (Winkler, 2012). They reflect the reality a corporation perceives or aspires toward and are tools for the exercise of soft power (Helin & Sandström, 2010). Corporate codes often read like legal documents, possibly because of some court opinions interpreting these documents as contracts (*Stasbiak v. Certified Logistics, INC.*, 2016). Despite their legal nature, some companies attempt to convey a conciliatory rather than stern tone, but the message to workers is unmistakable: comply or be disciplined. As a result, corporate codes can be regarded as encapsulating an aspect of employers’ attempt to control workers’ expectations of privacy in digital media environments.

A corporate code of conduct is “a set of guidelines denoting ethical principles and standards of professional and employee behavior” (Kurian, 2013). Corporate codes and their alternate labels possess certain features that make them particularly useful for understanding employer perspectives on work boundaries: (1) Corporate codes are recorded in some form that permits reference. They are often written documents. (2) They enumerate the company
policies regarding worker behavior. (3) They are limited in scope and affect conduct linked to work. (4) They require compliance.

Corporate codes also outline the ethical commitments of a company and its workers to the broader society. In the wake of scandals involving companies like Enron and WorldCom, corporate codes or codes of conduct have emerged as statements about the values espoused by companies and their workers in the course of doing business. The impact of these codes on actual behavior is not entirely clear and commentators suggest that the adoption of such codes of conduct may be less a question of real commitment to the values espoused therein and more of a desire to be perceived as committed to those values (Pitt & Groskaufmanis, 1989). While corporate expectation for codes is the mitigation of liability, courts are generally unwilling to automatically assume that the contravention of the code by a worker should relieve the company of liability flowing from common law principles of agency. The principle that companies should be responsible for damage caused by their workers in the course of business is supported by the idea that companies should bear the cost of worker misconduct while on the job, simply because the company is in a better position to pay damages and indemnify the worker. It is also an attempt to encourage better supervision of workers on the job. By outlining rules of behavior in a code, companies attempt to show that they have discharged duties of offering clear guidance on avoiding harm in the course of discharging work duties.

In addition to serving as a signal to external parties like courts, members of publics and the government, corporate codes also communicate acceptable conduct to workers. It is this aspect of corporate codes that bear on work boundaries. Signals to workers are not necessarily audience restrictive. They may also be employed as evidence of against workers in the case of employment related disputes. In particular, the contents of a corporate code can
be treated as constructive notice of certain facts or policies to a worker. They may also rise to the level of treatment as contract between companies and their workers. However, the judicial treatment of codes of conduct would depend on the specific facts of the case.

Because of the propensity to shift liability for misconduct to workers, some companies attempt to constrain the range of worker behavior on the job to conduct directly related to work. Understandably so, given the unpredictable scope of activities and data workers can port into the work sphere, exposing companies to liability, which may manifest in legal, business and public relations forms. From a legal perspective, the existence of a code of conduct may be calculated to mitigate court issued penalties and the policies function as notice to workers. From a business standpoint, such liability exists as a threat to profits owing from unauthorized disclosure of confidential information and policies are outlined to dissuade workers from engaging in such disclosures. From a public relations angle, the existence of a code of conduct with ethical policies and commitments to social responsibility can help with branding efforts and goodwill.

This chapter identifies how corporate policies define work boundaries and workers’ responses thereto. These boundaries address the flow of data and activities from work to non-work and vice versa. The boundaries also affect expectations of privacy, a theme that continues to run through this chapter’s treatment of work boundaries, as formulated by corporate codes and understood by workers. Although the analysis here is not strictly cause and effect, that is, this study does not aim to measure how the impact of corporate codes on workers’ boundary management practices, it nonetheless argues that the framing of work boundary policies is open to varied interpretation and inconsistent with workers’ data privacy.
**Worker Privacy**

A value that lies at stake in drawing, regulating and navigating work boundaries, especially in digital work environments, is privacy. New media technologies avail employers with more invasive and expansive methods of surveillance (Solove & Schwartz, 2015). A mix of constitutional law, common law, tort, and statutory provisions attempt to regulate the digital workspace—but there are nonetheless gray areas, and the rapid development and adoption of new technologies exacerbate the uncertainty. One particularly complex subject is the “reasonableness” criteria for privacy expectations that is crucial to Fourth Amendment privacy protections—for public-sector workers—and privacy torts (Determann & Sprague, 2011).

“A reasonable expectation of privacy” is a phrase that often appears in legal discussions of privacy. Although it is supposed to exemplify the connection between law and social norms, it is qualified by problems of norm selection and hegemony (Post, 1989). Despite these problems, alongside inconsistencies with empirical evidence (Slobogin & Schumacher, 1993), it has continued to thrive as a legal test for privacy. Workers hinging their suits on an expectation of privacy in the conduct of personal activities on employer-issued devices or networks are likely to fail unless they can show that such expectation is reasonable. For instance, a pregnant employee used her company e-mail account to hold conversations with her attorney about perceived workplace pregnancy discriminatory practices. She objected to her employer’s access to and use of the e-mails. However, the court held that it was unreasonable for an employee to have any expectation of privacy, having been informed that the company computer was to be used for company business only, and further that e-mails sent on the company computer were not private (Holmes v. Petrovich, 2011).
The primacy attached to artifact level analysis de-emphasizes the modern context of work in which workers transcend spatial boundaries of the workplace to engage in non-work activities through communication devices. Context here is socially constructed, pointing to practices as opposed to stable structures (Dourish, 2004). While the corporate ownership of the device and surveillance notices attached thereto are relevant, they ought not to constitute the exclusive considerations for reasonableness of privacy expectations, specifically because trends toward the integration of work and non-work present complexities that such an approach is unable to accommodate.

Similarly, a spatially situated analysis of privacy runs into the challenge of distinguishing activities conducted in the private realm and thus deserving of privacy protections from activities conducted in the public realm, which are regarded as fair game for surveillance. *Katz v. United States* (1967) and *Florida v. Riley* (1989) highlight the challenges that arise when place becomes the focal point in privacy determinations. In the former case, the Supreme Court elected to treat a person making use of a telephone booth as possessing a reasonable expectation of privacy and emphasized that “the Fourth Amendment protects people and not places” (*Katz v. United States* 1967, p. 351). Two decades later, the Supreme Court decided that Riley, who grew marijuana in his greenhouse, had no reasonable expectation of privacy from aerial surveillance conducted by an officer in a helicopter 400 feet above the ground.

Nissenbaum (2010) argues that these case decisions undermine privacy conceptions that are based on a dichotomy between private and public realms. She identifies new information technologies as emphasizing the “inconstancy of boundaries” and challenging legal definitions based on the public/private dichotomy. Given the blur between work and non-work (Gregg, 2011; Hochschild, 1997) and the widespread use of new media technologies
for work (Purcell & Rainie, 2014), this difficulty with determining the reasonableness of privacy expectations based on delineation between the private and public realm is reproduced in work relations.

Companies, through their codes, largely display awareness of the blur between the boundaries of work and non-work. In their codes, companies attempt to construct work boundaries by using largely similar articulations of privacy disclaimers, providing notice of the existence of monitoring systems, and using scenarios to aid comprehension of the boundaries of permissible conduct. To probe questions of corporate awareness of work boundaries and approaches to regulating boundary navigation, this section relies on an analysis of corporate codes of 100 Fortune 500 companies. I address the question of awareness of work boundary issues by using a binary coding system for analyzing the corporate codes alongside identification of companies that provide scenarios to exemplify the appropriate boundaries of work. Also, I identify monitoring notices and privacy disclaimers as the ways corporate codes address the integration of work and non-work.

The corporate codes analyzed in this study reveal an artifact-based and spatially situated approach to employee privacy. The corporate codes typically disclaim expectations of privacy when personal devices are used for work or when personal use is made of employer-issued devices. This blanket approach, without more, contradicts the framework of contextual integrity (Nissenbaum 2010), which recommends considering the surrounding context for information gathering, including the social circumstances and the amplification of power inequities. It also runs contrary to human flourishing (Cohen, 2012) by failing to consider the culture and “well-being of the embodied beings” (p. 6)—workers—who inhabit the realm of the workplace. Nissenbaum (2010) and Cohen (2012) move beyond traditional legal conceptions of privacy and enjoin a focus on the social and cultural contexts in which
privacy is invoked. In line with a contextual and culturally situated approach to privacy, this chapter proposes that corporate approaches to worker privacy can embody everyday practices of the workers, especially in digitally mediated environments.

**Digitally Mediated Environments of Work**

Despite being largely situated in software environments, the modern context of work has not materially changed the relationship between capital and labor. Software housed in ubiquitous devices merely represents another platform on which employer-worker tensions play out. The devices assist in the transcendence of spatial constraints to mediate interactions in multiple spheres. For instance, although physically situated at their workstations, workers may access software applications that allow them to shop, bank, message friends and catch up on their favorite shows. Conversely, while on vacations and at family dinners, workers can easily answer work e-mails and complete reports.

Computers do not exclusively mediate the practice of taking work into the non-work environment and non-work into the work environment. Nippert-Eng (1996), for instance, explores workers’ management of boundaries between home and work without reference to the devices under consideration here. Other boundary-related studies have sought to address the subject of role transition across boundaries (Ashforth, Kreiner, & Fugate, 2000); the factors affecting choices and outcomes of varying individual management approaches to work–family role synthesis (Kossek, Noe, & DeMarr, 1999); the methods of managerial control over the temporal boundaries between workers’ work and non-work lives (Perlow, 1998); and the difficulty in attaining work–life equilibrium despite corporate allusions to support for family values (Hochschild, 1997). However, the ease of switching spheres merely by switching windows makes the practice more pervasive. Gregg (2011) recognized the
capacity for new media technologies to encourage the performance of work outside of its temporal and spatial boundaries, citing the magnetism of these technologies alongside the precarity of modern employment. This chapter moves away from that primary focus on the flow of work into non-work, as employee privacy may be threatened by integration in any direction, and perhaps even more so by the flow of non-work into work.

On the employers’ side, a primary consideration in the management of work boundaries is organizational commitment, which Rothbard, Phillips, and Dumas (2005) suggest may be higher among integrators—workers that prefer to intermingle work and non-work. In an earlier study, Kirchmeyer (1995) indicated that “maintaining an inflexible and impermeable boundary between work and non-work did not seem conducive to building organizational commitment” (p. 530), suggesting that companies stand to benefit from adopting flexible work boundaries. Recognizing that companies’ approaches to work boundaries are varied and complex, particularly regarding the use of electronic communication devices, this study sets out to outline these approaches with emphasis on their implications for worker privacy. It shows how productivity, confidentiality of corporate data and worker monitoring are at the core of corporate perspectives on work boundaries.

**Content Analysis of Corporate Codes**

This study is based on publicly available corporate codes of some 100 Fortune 500 companies. The study restricted the number of codes analyzed to this number because the analysis progressively yielded consistent findings across the coding categories, and further analysis of additional codes appeared unlikely to change the coding categories or vary the findings significantly. These corporate codes were downloaded from the relevant company websites between August and September 2016. The corporate codes had labels such as

Corporate codes are often many pages long but dedicate specific sections to corporate policies on the boundaries of work on digital media, such as e-mail. The policy on work boundaries often manifests as a command to refrain from the personal use of corporate digital media, equipment, or network; a disclaimer of reasonable expectations of privacy; a notice of surveillance of all activities on company networks, media platforms, and equipment; an acknowledgement and acceptance of personal use of corporate digital media; and an admonition for reasonable use, among other policy statements. To identify these policies, I ran a search in each corporate code for these words: personal, privacy, private, monitor, and reasonable. In many of the corporate codes, the section addressing work boundaries in relation to digital media was returned. Sometimes, the results showed that the corporate policy on the subject was not restricted to one area but was spread across multiple sections in the code, in which case each section was parsed to ensure that no contradictions existed. Given the complexity of the legal language contained in the code, there are certain ambiguities that I have reflected in my coding scheme by assigning unclear policies to a separate category of analyses with consequences for my findings.

Besides the date of revision or publication, three other coding categories emerged from a close reading of the codes. The first, integration tolerance, indicates a company’s level of tolerance. The codes were classified into two groups based on whether they contained an express statement of tolerance for some level of integration, regardless of how minuscule this was. The second, privacy expectations, points to the level of disclosure about workers’ privacy expectations. Four levels of disclosure about privacy expectations were identified among the codes. (1) Yes: The corporate code explicitly indicates that workers have an
expectation of privacy in their personal communications on company communication technologies and personal devices used for work. (2) No: The corporate code includes an express disclaimer that workers have no expectation of privacy in their personal communications on company communication technologies and/or personal devices used for work. (3) Unstated: The corporate code implies the absence of privacy expectations based on a monitoring notice and/or an express prohibition of the conduct of personal affairs on company communication technologies. (4) Unclear: The corporate code permits personal use of company communication technologies, but privacy expectations are not addressed. The third, monitoring notices, indicates whether codes contain notices that employee activities on communication devices are monitored.

**Results: See Appendix 1 for full results**

Eighty-three percent of the corporate codes are dated between 2004 and 2016. The dates of the remaining 17% were unspecified. As Table 2 shows, 67% of the codes considered in the study disclosed that monitoring systems are in place to monitor workers’ use of company communication equipment and systems. Within this group of codes, a vast majority of policies state that workers have no privacy expectations in their use of the companies’ media technologies. Among these is Citi’s code of conduct, which states that

> Citi may monitor and record your use of its equipment, systems and services, and may intercept any information sent or received by you as a result of such use, at any time. Therefore, you should not have any expectation of personal privacy when you use Citi’s equipment, systems and services.

(Citi, 2015, p. 24)
Table 2. Corporate Codes by Privacy Expectation and Monitoring Notice.

<table>
<thead>
<tr>
<th>Monitoring notice</th>
<th>Privacy expectation</th>
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<th>No</th>
<th>Unstated</th>
<th>Unclear</th>
<th>Total</th>
</tr>
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<td>53</td>
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<td></td>
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</tbody>
</table>

a The corporate code implies the absence of privacy expectations based on monitoring notice and/or an express prohibition of the personal use of company communication technologies.

b The corporate code permits personal use of company communication technologies, but privacy expectations are not met.

Table 3 shows that 66 corporate codes explicitly permit some degree of personal use of company communication equipment and systems. About 60% of this group nonetheless disclaim any expectations of privacy, whereas about 70% disclose that monitoring systems are in place to surveil personal communications. For instance, Citigroup code permits “occasional personal use” of company devices, includes disclosures about monitoring, and disclaims privacy expectations.

Table 3. Corporate Codes with Varying Degrees of Integration Tolerance by Privacy Expectation and Monitoring Notice.

<table>
<thead>
<tr>
<th>Monitoring notice</th>
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<th>Unstated</th>
<th>Unclear</th>
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</tbody>
</table>

a The corporate code implies the absence of privacy expectations based on monitoring notice and/or an express prohibition of the personal use of company communication technologies.

b The Corporate Code permits personal use of company communication technologies, but privacy expectations are not met.

Table 4 shows that 34 corporate codes either expressly prohibit the personal use of company equipment and systems or make no mention of such use. About 60% of this group of 34 corporate codes disclose that monitoring systems are in place to surveil personal communications, whereas about 30% disclaim privacy expectations and 24% imply the
absence of privacy expectations. Forty-nine percent of this group of corporate codes
disclose some tolerance for integration yet disclaim privacy expectations or disclose
monitoring systems.

**Table 4. Corporate Codes Without Express Policies of Integration Tolerance by Privacy
Expectation and Monitoring Notice.**

<table>
<thead>
<tr>
<th>Monitoring notice</th>
<th>Privacy expectation</th>
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<th>Unstated¹</th>
<th>Unclear²</th>
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</tbody>
</table>

¹The corporate code implies the absence of privacy expectations based on monitoring notice
and/or an express prohibition of the personal use of company communication
technologies.
²The corporate code permits personal use of company communication technologies, but
privacy expectations are not met.

The results indicate the following: (1) Companies are generally aware of the trends toward
integration and display varying degrees of tolerance toward the practice. (2) Monitoring
notices and privacy disclaimers are employed as threats to control workers’ simultaneous use
of devices for work and non-work. (3) Companies are similar in their concerns about
workers’ personal use of company devices: intellectual property violations, obscene/illegal
content, gambling, harassment, security and confidentiality. (4) Some corporate codes stand
out for suggesting that worker and company interests are being balanced, thus moving away
from a complete disclaimer of privacy expectations—for example, United Health Group
(2015): “The Company will balance employee privacy with the need to maintain a safe and
efficient work environment” (p. 37); PepsiCo (2012): “It is generally not our practice to
monitor employees’ use of our information systems” (p. 34).
Integration, Monitoring, and Privacy Disclaimers

Sixty-six percent of the corporate codes in this study tolerate the simultaneous use of devices for work and non-work, displaying an awareness of modern trends of new media usage by workers. The language of the corporate codes in expressing company preferences on integration include limited personal use, incidental personal use, and occasional personal use. While other corporate codes did not express a tolerance for integration, it was clear that they were not oblivious to the phenomenon. A strict prohibition of the personal use of company communication devices, as contained in corporate codes from Sears Holdings and Johnson & Johnson, indicates awareness of the possibilities and tendencies toward such usage.

There are important stakes for tolerating, prohibiting, or ignoring integration. A policy of tolerance indicates a willingness to include worker culture in the institution of work boundaries. However, combining such an approach with monitoring and a disclaimer of privacy expectation is an extension of employers’ informational and surveillance powers across hitherto less permeable boundaries. On the other hand, prohibition denies the realities of work in modern times and encourages covert subversive practices among workers, including possible technical attempts to circumvent firewalls.

These variations in corporate treatments of the flow of the personal into work and vice versa stem from possible struggles to find the right level of integration that enhances worker productivity without jeopardizing company interests. For companies that permit incidental personal use of company equipment, a resignation toward integrating work and non-work spheres is likely. The various caveats imposed on such use—prohibiting visits to obscene sites and disclaiming privacy expectations—may be attempts to stem the tide and protect the company from liability due to the propensity to collapse boundaries. Given the nature of the computer and Internet, it is nonetheless difficult to prevent workers, especially white-collar
professionals with a measure of scheduling freedom, from taking detours off work. Technical restraints like website blocking are useful. However, there is always the problem of identifying all the websites workers are likely to visit for personal reasons because depending on the role of a worker, a visit to YouTube or Facebook may be work-related. Either way, workers may devise methods to circumvent the technical restraints. For instance, Hardlywork.in lets people view their Facebook newsfeed in excel spreadsheets so they can pretend to be working.

The hype surrounding the best work places may also contribute to the tendency toward a more permissive stance on the personal use of company equipment. In a modern twist to 20th-century welfare capitalism, employers seem inclined to incorporate non-work elements into the work environment. For instance, Google’s workplace is equipped with Lego play stations, gourmet cafeterias, massage rooms, and other eclectic features (Stewart, 2013) that indicate a shift toward a different type of worker welfare—one that caters to the workers’ ability to incorporate elements of the personal into work without shirking work responsibilities. Because companies like Google are held up as a standard for successful work environments (Amabile & Kramer, 2011), other companies may attempt to mirror the fuzzy boundaries of work and non-work in an attempt to compete for the best workers.

However, the potential benefits of the “incidental use” approach are not lost to companies. Permitting personal use of company equipment blurs the boundary between work and non-work in a manner than allows activities to flow both ways, leading workers to spend more hours at work, because they can juggle their duties with personal activities. They can do their banking from their workstations thus obviating the need to take an hour off for a bank trip. They can order groceries online instead of closing early for a trip to the grocery store. This win-win perspective is similar to what Schüll (2012) describes as the turn from
coercion to collusion, with new media acting as disciplinary machinery without the attendant alienation.

The permissive models of incidental use and silence are further self-policied among workers because of a common allegiance to company culture subtly created by management through polices. Abbott (2015), for instance, encourages workers to report workplace concerns because the company seeks to foster “a culture of compliance” (p. 20). Besides Abbott (2015), other corporate codes attempt to situate their policies within corporate culture, indicating that management is not quite willing to cede the formation of workplace culture to workers.

Despite these references to culture, corporate codes do not disclose actual practice and herein lies the primary limitation of using corporate codes as the basis for understanding work boundaries. Notwithstanding, the chapter indicates that integration practices are acknowledged and addressed by the Fortune 500 companies analyzed in this study and possibly by other companies outside of this sample. It has also shown the pervasiveness of a paradoxical practice of tolerating some degree of integration while imposing surveillance and disclaiming privacy expectations, thereby setting the stage for the chapter’s overarching argument for a worker privacy framework that accommodates the realities of integration.

**Codes and Boundary Management Practices**

Do corporate codes influence worker behavior? In a study designed in part to answer that question (Schwartz 2001), the author found that corporate codes influence employee behavior on very rare occasions. Workers in the study reported that they were quite able to distinguish between right or wrong behavior without reference to the code, which they considered mere commonsense and further that they had never faced a situation where they
had to consult the code for guidance. In the few instances that workers reported being influenced by corporate codes, the code served any of eight functions listed by Schwartz—(1) as a rule-book, the code acts to clarify expected behavior; (2) as a sign-post, the code can lead workers to consult other individuals or corporate policies to determine whether certain behavior is appropriate; (3) as a mirror, the code provides workers with an opportunity to confirm whether their behavior is acceptable to the corporation; (4) as a magnifying glass, the code suggests a note of caution to workers to be more careful or engage in greater reflection before acting; (5) as a shield, the code acts in a manner which allows workers to better challenge and resist unethical requests; (6) as a smoke detector, the code leads workers to try to convince others and warn them of their inappropriate behavior; (7) as a fire alarm, the code leads workers to contact the appropriate authority and report violations; and finally (8) as a club, the potential enforcement of the code causes workers to comply with the code's provisions.

The findings in the Schwartz study are largely replicated in my interviews with workers, who all, (except an in-house privacy counsel, John) indicated that they had not paid much attention to the corporate code but could guess its policies on work boundaries. Respondents in Fortune 500 companies could largely recall that their companies permitted personal use of corporate equipment and networks but were unable to specify the type and frequency of personal use anticipated by the company. They simply substituted their own ideas of reasonableness, pointing back to this study’s argument about varied perspectives on work boundaries. Notably, none of the respondents recalled the contents of a code. Rather, they recalled training sessions with Human Resources or Legal Departments. This observation is consistent with findings in consumer privacy, indicating that people generally skip legal notices like privacy policies and terms of service (Obar & Oeldorf-Hirsch 2018).
Although startup companies were not the focus of the content analyses, it seemed useful to examine their approach to work boundaries as a comparison with the large Fortune 500 companies analyzed. First, startup companies generally had no corporate codes. When startup workers alluded to the existence of a guidance document or I found public evidence of one, the document simply offered tips about company culture and little in the way of guidance about personal use of company equipment and network. Sally, a startup CEO explained that she trusted her workers “to know that they are coming to an early stage high growth startup and we do check-ins.” She expounded on “check-ins” to mean ascertaining workers’ progress on their tasks. She employed a productivity narrative, adding that she cared that workers met their deliverables and had no surveillance systems in place. Workers at her startup were responsible for managing their time and deciding how they got the job done. Provided they were available to complete their tasks, particularly between 9am and 5pm, they were at liberty to conduct personal activities simultaneously.

Similarly, Alpha-lytics gave its workers office tips about office snacks and not much else for the first four years of its existence. When the company hired a worker with questions about the corporate policies on a wide range of matters, including maternity leave, the CEO realized that the “office tips” failed to capture important policies. So, the company created what it described as a guidebook, which it described as a “living document.” The guidebook was a Google doc and existed in digital format. Workers could propose changes to the document and leave comments. As a result, the document kept evolving based on workers’ competing and evolving views on work boundaries. Although Marvin reported the absence of monitoring and a tolerance for integration, his representations had no basis in a fixed identifiable code.
The fluidity and nonexistence of startup codes made content analysis an unlikely exercise. However, since none of the respondents hired at Fortune 500 companies referred to their own expertly crafted corporate codes as the basis for any of their responses or behaviors, the real guidance value of these documents is cast in doubt. Combined with the vagueness associated with the language of corporate codes, respondents hired by Fortune 500 companies were generally unclear about the workings of company surveillance systems and largely influenced by their levels of fear and discomfort at being watched. As a result, respondents in both types of companies assumed varied approaches as I show with the stories of Sharon, Dave, Bill and Sally.

**Peer Regulation of Work Boundaries**

Sharon was an analyst in the compliance department of a large commercial bank in the Northeast. “I am very close to my boss,” she announced when she described her relationship with her team. “I tell him personal things about my life. I don’t know if that is normal but I do.” This blend between manager and confidant set the stage for a lot of integration between her work and non-work life.

Sharon did not like to work from home because the office computers had bigger screens, which made it easier to run multiple programs simultaneously. By using multiple screens available in the office, she could view more data and conduct her analysis more easily. Besides, the company did not provide a personal laptop so working from home meant she had to run software on her Mac. “I need to have my programs and it can be a pain to run them on my Mac,” she explained.

Sharon’s boyfriend often visited on Fridays and spent the whole weekend. Because her commute was about 90 minutes each way, she thought it was best to work remotely on Fridays so she could maximize the amount of time she spent with her boyfriend. Luckily, her
roommate had just bought a desktop computer so Sharon spent Fridays at home working on the desktop and her MacBook. She did not believe in leaving work within office spaces or work hours either. Her decision to work during her days off was driven by her sense of ownership of her assigned projects, and not a demanding work environment. She explained:

Sometimes I'm working on a project and maybe I have a few days off work then my boss tries to give the project to someone else … I don’t understand it. The person doesn’t know anything about the project. I always tell my boss I’ll do it. So I work from home to finish it.

She had no desire to keep her non-work life from seeping into work. She considered her co-workers friends and explained that they shared their personal phone numbers and conducted long group conversations on iMessage at all hours of the day. The conversations ranged from discussions about work projects to Friday night plans and George Costanza memes.

Was her manager comfortable with what appeared to be long digressions from work conversations during work hours? She seemed surprised by the idea. “He shows me his hiking pictures in the middle of the work day,” she explained, “and I show him pictures of my mom too.”

Sharon was comfortable checking her phone “all the time” in the office and took personal calls at work. “I don’t feel weird about it,” she declared. She often took an extra half hour during her lunch break to get her nails done because her managers only cared that she got her work done. She explained that she worked very hard and was justified in conducting personal activities at work.

Technically, I should be working 9-5 but I come in earlier, around 8:30 and I leave later. Some analysts leave at 5, I
don’t. I am not saying that is why. The people I work with are very hardworking people who are good at their jobs but they don’t breathe down your neck.

She thought that her approach to work could raise issues among some other analysts who were self-appointed work police. These analysts, though in her department, were not on her team and had caused some trouble for her “friend.” She thought the peer police were a nuisance who had no idea how productive their targets were but were only interested in seeing people perform exaggerated rituals of productivity like showing up to work early.

I feel like people are nosy though. Some people want to know when you come in and what you are working on. I don’t. If I feel someone is not doing their job, I leave it to the company to handle. My friend is having that problem. The other analysts come in very early but she doesn’t.

Despite her role as a “compliance” analyst, Sharon was very unconcerned with the rules governing work boundaries at the bank. She seemed very certain that her “common sense” was enough of a guide. She generally organized her life around her job and thought it was reasonable to engage in personal activities during traditional work hours, which for her was 9am-5pm. As long as her boss had no complaints, and it seemed like he did not, she continued to integrate her personal life into work.

She also seemed unperturbed by the possibility that her personal information, which she readily shared over the bank’s network, was being monitored. Everyone on her team, including the leader, shared personal information. She thought it would be odd for her to be singled out for a reprimand, despite the provisions of the corporate code. The bank’s corporate code, like most of those analyzed in this study, allowed for “minimal” or
“occasional” personal use of the company network. It also included a monitoring and data interception notice. Nonetheless, the team’s conduct appeared to constitute habitual rather than occasional personal use of the company network during traditional work hours.

The compliance team’s behavior is somewhat debatable. Arguably, their habit of exchanging personal information during work hours was a form of emotional labor, necessary for conforming to a team culture promoted by the team leader. Emotional labor is a kind of invisible work performed to self-regulate feelings on the job. It was originally employed by Hochschild to describe the type of work service workers like airhostesses, nurses and customer service performed (Hochschild 1983). It has since been expanded to include the work of emotional management conducted by other workers in their various interactions on the job. Here, I am concerned with emotional labor between co-workers and a possible explanation for Sharon’s behavior. Emotional labor is a constructed response to expectations of specific emotional displays. Such displays, Hochschild explains may be shallow or deep acting, where the former is merely a performance and the latter is an internalization of the emotions associated with the role.

Sharon’s team culture required members to be friends, rather than mere co-workers. It required them to share personal data as a currency of their team friendship and Sharon seemed to understand and accept those team-bonding terms. She had internalized the team’s expectations of friendship and performed her role happily. It seemed to help her bond with her job and integrate non-work into work. She reported no form of alienation from her work, embracing her duties in much the same way she welcomed intimacy with her team.

Incidentally, Sharon had a law degree and had worked for a big law firm before changing her career path. Given her background, concerns about corporate surveillance and the implications of bringing her personal data into the workplace would not have been out of
the ordinary. But Sharon was oblivious to the privacy and surveillance risks of her boundary navigation behavior. She imagined that the actual practices of the team defined their largely non-existent work boundaries rather than the text of a code she conceded she had never read and whose contents she did not care to know. She had chosen the boundary perspective advanced by her team and was uninterested in competing perspectives from the bank, despite the clear notice of data monitoring and interception.

“IT is watching me”

A father of two children and an engineer for over two decades, Dave was very concerned about being watched by his company and went to great lengths to separate his work life from his non-work life. Although his company had no written rules about work boundaries, Dave was not inclined to interpret his company’s overall silence on the matter loosely. “I have this paranoia that IT is watching me,” he explained, “so I don’t do personal shopping during work hours.” His concern may be connected to the history of network management in the company. For a few years, YouTube was blocked on the corporate network but because it was a useful educational and industry resource, the ban was lifted. There was little guidance about conducting personal activities on the corporate network and Dave reported spotting co-workers visiting Amazon and news sites. “It is self-regulatory,” he explained, “I see people on Amazon or CNN but never heard of anyone being reprimanded for it. Maybe the IT department records all the websites visited and submits it to the higher ups.” Laughing, he added, “Or I might just be paranoid.” His company code of conduct, one of those analyzed in the previous section allowed for “occasional personal use” and gave no indication that workers’ online activities were monitored.
After work hours, Dave was comfortable staying back in the office for a few minutes after 6pm to do some online shopping. He used his personal mobile phone as a hotspot though, because he did not want to conduct personal transactions on the corporate network. His paranoia forced him to conduct his activities such that he had a good defense if he was ever confronted by IT. His defense was twofold: time and network ownership. He conducted such activities after work hours and on his own network. It seemed peculiar though that he thought nothing of using company equipment but avoided using the network.

Dave also tried to prevent his work activities from spilling into his non-work time and spaces. He had recently deleted his work email application from his phone to help him be more present with his family. He had also formed the practice of working for 11-12 hours every weekday, beginning at 7am, while driving to work and ending between 6pm and 7pm, when he left the office. Although he often checked his email before retiring to bed, he typically refrained from responding. He just liked to get a sense of what was awaiting him the next day. His team members in Hawaii bore the brunt of his distaste for late night work. It often meant that he wanted to schedule an early morning call while they were barely out of bed. While driving to work in the morning, he liked to make Skype voice calls to resolve any technical issues from the previous day.

Although Dave preferred a clear separation between his work and non-work lives, he made an exception where his kids were concerned. His 17-year-old daughter was away in boarding school and he had a 10-year-old son who lived at home. While at work, he often received emails that required him to access his “parent” account to communicate with his kids’ schools or submit approvals for school activities. Also, he usually had his son in the car while he handled work matters over the phone. He explained that this arrangement helped
him spend time with his son while working. However, the quality of the time spent with his son was a different matter entirely.

Dave would have preferred to work remotely. If he was not constrained to show up to the office every day of the week, he reckoned he would worry less about protecting his personal and family time. The space requirements put in place by his boss compelled him to enforce strict time requirements. He had petitioned his manager multiple times to let him work from home a few times every week but his requests had been denied. In his estimation, the company was entitled only to the amount of work he could complete in and on his way to the office.

He sympathized with the work orientation of his superiors though. “The higher ups are old school,” he explained and “working remotely requires a level of faith and a certain amount of security.” As an engineer, he was wary of insecure networks, which contributed to his wariness about working outside the office. It didn’t stop him from complaining about the poor logic of a daily two-hour commute. “If I am spending most of my day in phone meetings, why do I need to come into work, he asked. It doesn’t matter where you twiddle your thumbs, as long as you are available to work when needed.”

He did not find exclusive remote work attractive either because he wanted to meet the people with whom he worked. He spent a great deal of time teaching other engineers and thought that the “face time” made teaching more effective. His dream job was teaching, which led him to emphasize his instructional roles over his engineering duties. “I would love to be a teacher, not an engineer,” he interjected at some point in his story, “To me that is the greatest thing you can do…” Because of his desire to be around other workers while retaining the option to work remotely, his idea of work boundaries focused on flexibility,
direct contrast with “the higher-ups” who imposed strict spatial work boundaries between 9am and 5pm.

“Engineers like autonomy”

Researcher: What are your company rules on personal use of the corporate network?

Bill: If I remember correctly, the legal team asked for responsible use

Researcher: What does “responsible” mean?

Bill: Attending to personal stuff on the back end only when there is a downtime

A few days later, Bill sent a screenshot of his employer’s policy on personal use of the company network, which allowed limited personal use “as long as there is no significant cost for [the company], work is not disrupted and the activities do not violate policies or laws.”

Our exchange highlights the gap between the actual corporate rules on work boundaries, which may be conveyed in vague terms like “responsible use” but nonetheless have far reaching legal implications, and what workers think the rules are, which varies from one person to another. Bill, a network engineer, felt justified “attending to personal stuff on the back end,” which included shopping on Amazon, provided he kept up with his work tasks. He explained that engineers liked their autonomy and did not respond well to control.

Unlike Dave, Bill was more inclined to interpret acceptable personal use very loosely. Despite his openness to conducting personal activities on the company device and network, Bill was not as inclined to conduct work activities on his personal time or device. He had worked several hours overtime during his first few months at the company and ensured that he submitted those hours for overtime payment. Once he was familiar with the company
technology and the expected pace of work, he reduced his work time to 40 hours per week and rarely worked overtime.

Bill had spent the first year at his job using Slack. He hated it. He thought it was hard to figure out what channels to join. He found the experience “confusing.” The company moved to an internally developed collaboration tool, Spark, which Bill found more intuitive and user friendly. He preferred Spark to email because the former supported informal and spontaneous communication on projects. Besides, more work-related conversations took place in Spark, while his team reserved email for sending jokes and memes. He could safely ignore email for days without missing any important task updates.

Despite his preference for Spark, Bill turned off notifications after work. It was easy for colleagues to assign tasks via Spark but he reckoned that if an assignment was very urgent, someone would call his mobile phone. He opened his Spark app at the beginning of the workweek to see messages from the weekend. Often, the senders had resolved whatever network problems they were experiencing and Bill felt justified in continuing his pursuit of a work-free weekend. Sometimes, his manager put a call through to him and he was compelled to work during the weekend. He had recently found himself doing quite a bit of weekend work with the Australian team because of the 19-hour time difference.

Bill’s experience with requesting permission to work remotely was similar to Dave’s. The company had the infrastructure in place to support remote work but it was discouraged so engineers had to report to physical workstations but still complete their assignments in digital environments. Rather than translate into more interpersonal interactions with other engineers, the requirement to show up in a physical workplace did nothing to change the default environment for communication. It remained digital media. If Bill found the contradiction odd, he shrugged it off without much consideration.
“I refuse to use Slack!”

Like Bill, Sally hated Slack. She had never tried it though. Her team loved Slack but she “refused” to use it. Since she was the head of her team, nobody seemed to mind her abstinence. She did not like email either. She found it “overwhelming, time consuming and a generator of follow-up tasks,” so she hired an assistant to manage it. “I am like a grandma in tech,” she declared. Unlike Sharon, Sally had strong personal ideas about work boundaries that conflicted with her team’s vision of boundaries. Possibly because she wielded more power in her team than Sharon did at the bank, Sally could refuse to cave to team pressure.

As the chief executive officer of a startup, she tried to instill some of her ideas about work boundaries in her team. She thought work and non-work should be kept separate, at least temporally. Since there was no code of conduct or written policy on the subject in the company, Sally’s opinions, as conveyed to her workers, formed unwritten company policies. Although she was responsible for setting the tone about reasonable expectations of privacy and the degree of corporate surveillance, she did not think those were the primary reasons for maintaining clear work boundaries. Her views were shaped by her experience with her family when she left her job at Google to launch the startup.

I think the discipline of treating [a startup] like a 9-5 job is an important signal to send to your family. I have seen a lot of startups fail because they don’t discipline themselves to work during certain time windows. My family knows now to call me only if it is an emergency. It took a long time for them to respect the discipline that it takes for businesses to succeed.

Despite her preference for the “9-5 discipline” among her workers, she was quick to admit that they were often required to work extra hours. In return, the company was very
understanding of the personal use of company resources to stay in touch with family. She trusted her workers to self-regulate their behavior to maximize productivity. Since the company was a startup, she thought there was little room for “slackers.” But unlike larger companies that may rely on network monitoring to identify “unproductive” workers, Sally had a simpler measure and it was delivery on tasks.

We are really small so we know when you are doing your work and when you are slacking. I can tell pretty easily when you are behind on your deliverables. We trust that they know that they are coming to an early stage high growth startup and we do check-ins and are clear that if we don’t deliver, we don’t make money and we can’t pay you. That’s pretty clear

Sally explained that at large companies like Google, workers could get away with conducting personal activities on the job. The demands were not as high and chances were that somebody else would pick up the slack because it was such a large company. At her startup, slacking on the job would be too obvious to ignore. She understood that 9-5 was not the preferred work window for several of her workers. In fact at Google, she had routinely worked 1pm to 10pm but her startup, a business-to-business model, required that she be available to interact with business clients during traditional work hours and other hours as well, for non-traditional clients. As far as she knew, it was impossible to experience time bound work at a startup. She confessed, “at least at Google, I could leave work at work.”

The struggle between her acknowledged ideal of time-bound work and the productivity and availability requirements of a startup was resolved in favor of the latter, at least in the short term. As her company acquired more clients, she found it easier to take vacations and offer uninterrupted vacations to her team members as well. “Family is important to me,” she
acknowledged solemnly. Her goal was to acquire enough business to be able to offer her workers unlimited vacation days every year. After all, she trusted them to make the right choices about when and how to work.

**Conclusion**

As a result of gaps in the law’s applicability to digital workspaces, employers have encoded their perspectives on work boundaries into corporate codes, knowledge of which workers are assumed to have. However, this study highlights the disparity between actual and constructive knowledge. The interviews suggest that workers often lack actual knowledge of the contents of the corporate codes and instead make assumptions about the contents and meaning of corporate policies on work boundaries. For instance, Sharon preferred to integrate work and non-work beyond the levels dictated by her employer and knew nothing of her company’s policies. Also, Bill liked his autonomy so he interpreted corporate rules to conform with his preferred boundary management behavior, which included shopping online during work hours and turning off the corporate communication application on his phone, thereby making him harder to reach outside of work hours.

This chapter has highlighted how the employer side of work boundary regulation is conveyed not just through corporate codes but also through management, which converts textual rules into interpersonal communication. Enforcing or defining boundary policies through management may ensure higher levels of compliance but does little to bridge the gap between employer and worker boundary preferences. For instance, Dave preferred flexible boundary policies but complied with the higher-ups’ strict requirements of office presence. He extended his employers’ spatial and temporal restrictions online as well, making exceptions only for his children. Sally, as both employer and worker, set a 9-5 (plus extra
hours) policy, while acknowledging that some of her workers preferred to work different hours. She had plans to allow her workers to determine their own work hours once the company had enough revenue provided they delivered on their projects.

This chapter further queried the contradictory practice of tolerating integration while engaging in monitoring and disclaiming privacy expectations. It recognizes that the overarching corporate goal of maximizing productivity, confidentiality of corporate data and surveillance drives corporate employers to enjoy the benefits of integration while avoiding obligations to protect workers from the consequent risks. Workers are thus left to guard their space, time and data boundaries. But as the next chapter shows, few know that they should and even fewer can or know how.
Chapter 4

Boundary Management Practices

The preceding chapter began to show that notwithstanding the bounding rules and architecture established by corporations, workers might hold competing views, and where possible, elect to pursue an alternative ideal of work boundaries. In this way, workers exert their influence on work boundary regulation. This chapter delves into factors motivating the various work boundary preferences of workers interviewed in this study, to show the social, economic, political and personal drivers of their preferences and practices. Unearthing the reasons for work boundary preferences contributes to the ongoing narrative of competing ideas about work boundaries and more importantly, the far-reaching effects of work boundaries on workers’ lives. These factors underlying work boundary preferences are also useful for thinking through more appropriate work boundary policies in the digital context of work.

Through individual and collective action, workers, influenced by internal and external forces, redefine the perimeters of work constructed by other actants. By internal forces, I refer to acts of self-regulation as an individualized way of defining and responding to work boundaries and peer regulation as a collective approach to defining and policing work boundaries. In this chapter, I relate accounts of how different workers think about the boundaries of work and non-work, the ideals to which they aspire and the behaviors they are forced to adopt in response to their perceptions of external regulation.
Sharon’s story from the previous chapter highlights self-regulation and peer-regulation. She thought it was fine to take an extra half hour of lunchtime to get her nails done. Her justification was that she came in early and often worked late. Sharon shows how workers operate what I describe as an internal system of keeping score. Though they may not be subject to a clock-in system that ties work to pay, workers like Sharon have nonetheless internalized a system of balancing an unwritten tally of work and personal activities. They write off their personal indulgences on the job against what they consider a long list of the times they went the extra mile to deliver on work projects.

While individual workers had all the information needed to create their own tallies, they had an incomplete picture of their colleagues’ circumstances. Sharon’s “friend” was an example of a person about whom peers may have held incomplete information. Unknown to the other analysts on her team, her workload required late night work, which led her to report at work later than other team members. In response, her peers complained about her poor work ethic within earshot and to her manager.

In a study about workers’ experiences with Blackberry use, Mazmanian, Orlikowski and Yates (2006) note: “when power dynamics encourage imitation, shared assumptions evolve into social norms.” As a result, workers are often compelled to adopt the work patterns of their managers or more powerful peers. Sharon’s experience with her friendly team is indicative of the spread of norms of interaction among work teams. Sharon joined the team and immediately adapted to her boss’ style of work, which was largely treated as project among a group of friends. According to her, he shared photos of his hiking trip and in return, she showed him photos of her mom. Once her boss had signaled that he considered work boundaries fluid, Sharon and her teammates promptly integrated work and non-work.
Another respondent, Casey, summarized her experience quite simply, “I really feel this weird pressure to conform to what others do.

Dave’s work experience offers a contrast. After “the higher-ups” denied his requests to work from home a few days every week, he decided to take extra steps to strengthen the boundaries of work and keep it from spilling into his personal and family time. In some sense, he was also practicing a sort of balancing exercise, supported by the logic that if work was inflexibly bound in the office during week days then he was under no obligation to let work infringe on his non-work spaces. In the same vein, he generally refrained from engaging in personal activities in workspaces. When he engaged in online shopping after work hours but in the office space, he switched to his personal network and rehearsed his defenses in the event that his behavior was called out. Except for such rare online shopping instances and online authorization for his children’ school activities, Dave was committed to leaving work at work and home at home. It seemed though that he considered his car neutral territory where work and non-work could collide; since he spent the mornings making work calls while driving his son to school.

But not every worker feels compelled to conform to the work patterns of their team. Marvin, while explaining the process of adoption and use of Slack on his team and in his company, identified one of his direct reports, an engineer, Steve, who simply refused to use Slack. He continued to object even after the product was adopted as the official platform for company communication and conceded to check his Slack notifications once daily. Of course, such dissenters are typically powerful actors in the company, unlikely to feel any particular need to conform to others’ expectations. Likewise, even though her entire team used Slack, Sally, the startup CEO, refused to use it. She was not worried about going against the grain though; probably because she owned the company. “I refuse to use Slack because it
is like playing all day,” she explained. Despite her opinion of Slack, she did not restrain her team’s use. Her attitude to employee management was encapsulated in her statement: “we trust our employees.”

Another angle to the varied ways of using communication and collaboration tools is worker preference. Rothbard, Phillips & Dumas (2005) view work boundary preferences as existing on a scale, with workers occupying varying points on the single continuum, which has integration and segmentation at either end. This approach is power agnostic and simply asks what workers prefer. However, it does not necessarily represent the reality of boundary management in which workers are compelled to engage. For instance, while Sharon was pleased with her integrated circumstances, Dave was not particularly excited to perform any personal activity in the workplace.

In the individual stories of the workers examined in this chapter, the various motivations for, and constraints against the attainment of preferred work boundary approaches start to emerge.

**Casey**

Casey had worked as a researcher at a technology company on the west coast for over 3 years and held multiple graduate degrees. Her company used a range of communication tools including email, Webex (a video conferencing and messaging tool) and Slack. The company also used a file repository like Box to share documents. Casey described her communication and collaboration preferences and situation thus:

> I like asynchronicity. When you receive a chat or Slack [message], there is the expectation that you will be responding quickly but it can be distracting if I am working on something
else and have to break what I am doing to respond to this message. With email, I can wait for a natural break period before responding.

It is also great for documentation. I find it difficult to keep track of things in Slack. It also depends on the type of project. Slack is not uniformly used across the company and so on some projects, pretty much all the work happens inside Slack. It just depends on each project. I like that there are options. But the fact that communication is customizable makes it hard to manage. It presents a form of complexity.

I get phone calls as well. As a millennial, we never talk on the phone but here; we live and die on the phone. We use Webex for meetings. On some projects where I am working really closely with someone, I have made a phone call. But it is rare. I don’t make impromptu calls.

I really feel this weird pressure to conform to what others do. I don’t like the Slack desktop because it hogs so much CPU, so I don’t use it. But when I have a Slack message, I get an email alert so I know to check Slack. There were a few times I missed messages in Slack so I just kind of told people and they were like “OK, I’ll just email you.” I feel like we do a lot of asking people what they prefer and kind of reach out to them that way. I just communicate my preferences to people.
I think people are fine with email because the corporate world is email-based so if you need a response, you can email them.

Casey’s company had a BYOD policy in place for phones but also issued company-owned phones to some workers. Casey did not get a company issued phone so she used her personal phone for work. She was issued a company laptop and used it exclusively for work. She reported a love-hate relationship with email among some of her co-workers. She described it as: “I like it, but then I hate it.” She decided to keep her phone free of work email.

There was a difference between the general approach to work time at Casey’s company and individuals’ preferred work durations. Casey explained:

The company is very work-life balanced. There is no expectation that I am going to be answering emails at 10 o’clock at night. It is a point of pride in our company that it is 9-5 and no one expects you to be working round the clock. We are all high performing overachieving people though so it is hard to disconnect. My work stuff is only on my work laptop not on my personal device. I check my email before I go to bed. I work outside of the 9-5 but it is because I want to feel more in control but you are definitely seen as an outlier if you work so hard.

Casey’s boundary management practices were primarily driven by a desire to conform to the practices of her ever-changing project teams. As a single millennial, without dependents,
she was not driven by a need to manage the home front, as examined by Hochschild (2012). Rather, she only allowed the flow of work into non-work to get a jumpstart on her projects and “feel more in control.”

**Elena**

Elena worked at a 25-person media agency for a few years. There, she negotiated copyright license contracts with artistes. She soon found the agency’s exclusive reliance on email communication inefficient for coordinating with remote team members and shortly after she joined, she pushed for the adoption of Slack. The company CEO, Mr. Parker, whom she described as “set in his ways,” wanted her to run it on a trial period first before making an adoption decision. The older workers (about 45 years) did not like Slack but the younger generation embraced it. Mr. Parker decided to adopt the product, primarily because he liked the synchronicity. On email, he experienced some anxiety about not knowing whether the recipient was online and when to expect a response. With Slack however, he made his workers clock-in in a dedicated channel and maintain an online status until it was time to clock-out. For him productivity and presence were tied so workers could get a pass on underwhelming output, provided they had maintained visible presence in the workspace. If they were not visible in the workspace, he grew upset and critical.

Elena understood how her boss liked to work so she adapted to ensure she conformed to his interpretation of productivity. She explained:

I would send my boss updates of all the projects I was working on, the goals for the day and the goals for the week. I would ask him if there was any priority project because if I did that, then no matter what else I did not do, I would be
productive because that was valuable in his eyes. I kept checking with him during the day because his priorities changed a lot. I was always looking for holes to fill and that is very easy to do when you are at a small company and there are only 25 people.

Despite his preference for “office presence,” at least among the workers based in Los Angeles, Elena successfully negotiated for the option to work remotely twice every week so that she could avoid the travel time to the office, given LA’s reputation for gridlocks. She got her remote option; her boss secured a system to assure himself that his workers were hard at work; and her colleagues thought Slack helped them reach out with questions and concerns about projects more easily. Thus, Elena had managed to create her preferred communication environment and only the people older than 45 years had complaints.

Elena contrasted her work at the media agency with a previous job at a music studio. Her manager at her previous job allowed workers to watch Netflix on the job, as long as there were no pending work tasks. In a demand for reciprocity, he expected workers to work hard when assignments arrived, given the downtime privileges they enjoyed. At the media agency, however, the CEO expected workers to always find something to do. On rare occasions, he would take the workers out to lunches and dinners during a downtime. However, he would not allow personal activities in the workplace.

Like Casey, Elena was a single millennial. However, she lived with her parents and enjoyed spending time with them. Her desire to work from home (thus shifting spatial boundaries of work) developed as her solution to the traffic problem she experienced in LA and she was sold on enterprise software’s capacity to free her from the problems associated with navigating physical workspaces.
Marcia

Marcia had spent over 3 years working for a technology company in California and had recently returned from an extended period away from work during which she decided to set work boundaries. “I was hired as a foreign worker on the H1-B visa,” she explained, “so I thought I had to overwork myself every day, to prove that I was worthy of continued sponsorship.” When she tried to pace herself, she realized she was mentally composing responses to emails, even as she lay in bed at night trying to sleep.

Marcia was an embodiment of the external considerations that fuel a constant connection to technology. She was already a minority along the lines of race, gender and nationality in the United States. In addition, she was an assistant cloud engineer. Every day, she worked hard to prove herself worthy of her work permit, which meant late nights and early mornings at the beginning of her tenure in the company. During her first year, she figured that she could work from home a few days every week and she did, gaining an extra hour of sleep. A colleague soon informed her that working remotely between 9am and 5pm on weekdays triggered reports to her manager and could negatively impact her performance evaluation. Marcia stopped working from home until she had secured permanent residency in the country a few years later.

She often commenced work by 6 am and her workdays were filled with meetings. She tried to find time to work between meetings but it was hard and she had to make up for the loss of time with her sleep hours. Since she also worked with teams in Sydney, Tokyo, Singapore and New York, she felt that she had very little control over her work schedule. She found herself answering calls in the middle of the night and staying up late to connect with colleagues in other time zones. It was not clear why she bent over backwards to
accommodate the work schedules in other time zones when her colleagues did not appear to rearrange their work schedules to fit hers. Perhaps the company and her colleagues did not require her constant presence at work. But no one told her to slow down so she continued to work for as long as she could physically manage.

She liked to pick up the phone and talk to her colleagues but was wary of people going back on an agreed course of action. “I can’t record phone conversations but email is great for future reference in case of a dispute.” She thought that emails had to be carefully drafted and ended up being “super long, super worded and just unnecessary.” But she stomached email when she needed to keep records of a conversation.

Her company also had an internal chat tool, which she used when her colleagues were not available on the phone. She was very careful though because the company monitored communications and a lot of people had been fired for sending inappropriate messages. She did not know any of those people specifically but had heard stories from other colleagues. She said again and again, “I am very careful.”

Although Marcia would have preferred to work from home and communicate exclusively over the phone, she found herself constrained by her manager’s reported preference for showing up in person and the need to keep written records of communication. She was particularly “careful” not to breach the boundaries of work, as defined by the company, because of her precarious position. She conforms to the Mills’ description of powerless of white-collar workers in the 20th century. C Wright Mills wrote: “the white-collar man is the small creature who is acted upon but who does not act.” Mill’s disdain for the white-collar man, who defines many knowledge workers—“those engaging in activities, … that are designed chiefly to aid in the generation, transmission, or reception of knowledge”(Machlup 2014)—primarily arises from his lack of independence from external
control. I propose that there is more nuance to Mills’ observation than he admits. The level of power exercised by each knowledge worker is highly contextual, as Marcia’s story shows.

When Marcia experienced precarity, she conformed to the company’s boundary preferences (or what she understood them to be). She was constrained by the need to show up at the office despite her preference for working from home a few times every week. She also preferred moderate integration levels but her peculiar circumstances compelled her to maintain extreme levels of integration that transformed into stress and threatened her health. Once she secured permanent residency in the United States, Marcia adjusted her boundary management practices to conform to her preferences. She started to work from home more than she went into the office.

Another aspect of this study that challenges the idea that workers fail to act on their circumstances is the adoption of Slack in Data-io. There, workers decided to switch from email-centric conversations to communication within Slack and the company eventually went along with the shift. Also, Sally refused to adopt Slack and Sharon developed her own rules for managing her work time.

**Leo**

“I think I might have left the company if I didn’t have that flexibility because it allows me to manage the home front.” Leo was describing the freedom he enjoyed to work from home. It allowed him to drop one of his daughters off at piano lessons in the middle of the day and that was important to him. He explained that in his company, such freedom was dependent on workers’ seniority in the company and their managers’ preferences. “Some [managers] want you to come in every day, he explained. “Once you are mid-management level though, nobody is looking over your shoulder.” He tried to go into the office a few times a week
though. “Office presence,” according to Leo, helped productivity because “things could happen faster and white boarding [industry speak for brainstorming and writing ideas on a whiteboard] if it is needed, is faster that way. I like to walk up to someone’s desk and talk about things that need to be resolved.”

He thought there was an unwritten protocol that determined the appropriate communication tool on any occasion. A formal meeting request from an unfamiliar co-worker was scheduled via email and conducted using Webex video conferencing. Once rapport was established, he moved to chat. When an issue had to be resolved quickly, he picked up the phone. His best tool was chat because “it lacked the intrusive quality of phone calls and slow pace of email exchanges.”

Leo’s device management approach was full integration. His laptop was company issued, but he used it for personal activities as well because he did not have a personal laptop and saw no reason to purchase one. “I don’t do a lot of personal things,” he explained. “I read emails and the news. I don’t do Facebook or other social media, except LinkedIn.” However his smartphone was subject to a BYOD policy. He paid for the device, while his company paid his phone bills. He assumed his company had no policies governing personal use of the company network (On my prodding, he found out that the company had some policies.) and concluded: “If you are doing anything wrong, IT will let you know.” He was not bothered that his company had access to personal data on his devices. He did not think the data was interesting anyway. Leo’s primary concern was having a flexible schedule so he could in turn manage his family life and he was willing to quit his job to do achieve his goals.

Cody

After a decade of working from home, Cody, a systems engineer at a technology company headquartered on the West Coast, was curious about the office culture in the new company
he had just joined. He decided to drop his children off at daycare a few days every week and work at the office. His office was open plan, had a gym and sleep pods as well. Although he found it unnerving to be surrounded by people at first, he soon embraced the opportunity to develop his social skills.

The “culture” as he described it was very laidback. People could engage in personal activities on their screens for everyone to see. Some people retired into sleep pods to nap. “I can’t imagine sleeping in the pod,” he remarked “People can see you!” He got used to doing his online shopping and buying travel tickets in full view of the office though. If it was something private, he would find a secluded corner and complete the transaction there.

Cody thought his job was a perfect fit. He worked wherever he preferred and for as long as he liked, usually from 9am to 5pm. With his new job, he spent less time with his children but did not view it as a negative effect because he could decide to work from home and spend more time with them, whenever he chose. He felt no external pressure to stay intimately connected with work at all hours and the only challenge he had with the collaboration culture at work was what he described as a “maniacal note taking culture” at meetings. He asked, “Do I really need to participate in that?”

Cody’s boundary management practices were driven by his need for flexibility to spend time with his children. While he felt strongly about it, his ability to manage his own work time had never been threatened in all his work experience so he could not imagine strict work boundaries that prevented him from being with his family at whenever he liked. While he enjoyed the novelty of going into the office, he liked being able to work elsewhere as well, highlighting a personal need for control and a family driven approach to setting work boundaries.
Disembodied Work

C Wright Mills wrote: “white collar workers slipped quietly into modern society.” I suppose they have now migrated into digital environments, where their work enjoys and endures varying levels of disembodiment. Like the cloud projects a misleading image of its environmental footprint, digital environments of work filled with collaborating disembodied workers, hide the sleepless nights and anxiety that support the transcendence of time and space.

Marcia was no stranger to sleeplessness. She experienced late nights and early mornings to connect with teams in other time zones but seemed more disgruntled with having to physically appear in the office. Online, she was no longer the black female engineer. She was simply another character sharing knowledge in text form and blending well with the rest of the team. The chat tool created a sort of equalization, which was possible only in a disembodied state. In contrast, Dave preferred to meet with his collaborators in person. Although he wanted the option to work remotely, he thought it was a good idea to meet in person often. He believed his teaching duties on the engineering team were better discharged in person than through media.

Cody shared similar views as Dave. He had spent over a decade working from home and had recently changed jobs. In his new role, he exercised the option to work in the office a few times every week.

I now see the benefit of going to the [physical] office. I have to talk to human beings; build social skills…I have to get to know people’s names and build relationships with the people around me. You need to build trust and credibility with a
team of people you see every day. In the remote role, that part wasn’t a major focus.

In addition to building social skills, Cody thought that working the same room as his team allowed him to pick up on the nuances of their body language and not just the content of their speech. The typical mode of communication in the office was Google Chat, though so he was nonetheless compelled to engage in the mode of communication he used as a remote worker because “you can’t just walk up to people and start talking.”

Organizational Status

Although Marcia, working out of a telecommunications company in Seattle, woke up early to join US East Coast calls at 6 am PST, she often found herself waiting up to a whole day when she sent queries to other time zones. The anxiety that fueled her presence at work during non-traditional hours, kept her on the edge when responses were delayed. Rather than relax into a more traditional routine of handling queries, she continued being ever present at work. She responded to queries with unwarranted immediacy until she secured permanent residency and experienced a health scare.

Marcia had tried to speed work in various company locations to conform to her hyper normal pace. She had reasons for her pace but few other workers understood or shared her circumstances. While Marvin indicated that his preferred work schedule could be upended by his manager’s ill-timed messages, Marcia reported frustration at being unable to influence others’ work pace and schedules. Her colleagues tended to respond at their own time, while she kept late nights and roused early to ensure she responded to pending queries from other time zones. Rather than conform to Marcia’s pace, her collaborators compelled her to conform to theirs. By her third year at the company, Marcia had slowed her work pace and
reduced her work hours. The experience conforms to the observation that “certain bodies [defied by power and class] recalibrate to the time of others as a significant condition of their labor” (Sharma, 2014 p.20).

Marcia later identified some reasons for her experience, including lack of familiarity with the company system and culture at the initial stages of her employment. As a new employee and minority, she thought she had to prove herself, an agenda most of her collaborators did not share because they had been at the company longer and did not experience the same levels of precarity as did Marcia. Also, Marvin’s account late night messaging at Data-io supports the view that organizational status influences the capacity to solicit a response at odd hours. Marvin’s manager expected responses to middle-of-the-night messages and got them. But Marvin’s manager was the CEO and Marcia was an assistant engineer.

Bill likewise experienced a similar shift from his initial approach to work to his subsequent attitude. He had needed time to get used to the technology at his company, which translated into longer work hours. Once he got a hang of the technology and identified the culture surrounding the prioritization and relegation of tasks in the company, he stopped working overtime. He was not driven by family considerations. Rather, he was concerned about protecting his personal time so he could explore the social scene in San Francisco, where he reported having many friends.

**John**

As an employee and policy counsel at Giztech (a pseudonym for one of the companies considered in the preceding chapter), John provided a dual perspective about work boundaries. He projected an “organization man” persona, describing employees as “ambassadors” of their companies. He thought that companies had a public relations
interest in restricting their data collection to the barest minimum and that reasonable personal use of corporate devices and network was fine.

There'll be some threshold that defines what reasonable use is. It is probably not 90% of the time you are doing personal stuff. I would assume many corporations are not so rigid about it that they won’t allow the employee to have some access for personal use. It just seems reasonable if a person is traveling that they might do some personal business on their laptop. From a legal standpoint, you can draw a line in the sand. I don’t think that would stand up in every jurisdiction. From a policy standpoint, you want to make sure that you check what jurisdiction has the highest bar and what jurisdiction has the lowest bar and situate your policy somewhere between.

He also pushed back on the practice of evaluating workers’ performance based on exaggerated rituals of productivity. “Assuming everything is going on as it should,” he noted, “the company does not need to know how many key strokes John made today.” He thought that autonomy helped workers determine the best ways to do work and benefitted companies in the long run.

I’ll be candid with you, I am a telecommuter. I actually work more now than when I went into the office. I don’t mind it because my day belongs to me. Obviously for me, it is not like “where is John, why is he not at his desk?” There is a
downside for developing camaraderie with our team but for me, I have enough friends. When I am working, I don’t mind not being down the hall from somebody. As long as there are other people like me in the world, and hopefully there are a few, they might find that the connectivity trend has some benefits to it. People who are evaluating the performance of these people like my boss and boss’ boss’ boss need to step back and go, we are not judging John based on how many hours he is online, we are judging John based on whether he does what he is supposed to do when he is supposed to do it and all the other stuff is incidental. I think there is a benefit to being able to work from different places and at different times. It allows us as individuals to optimize the way we work and it is not always optimized between 8 and 5.

John was willing to work a few more hours every day in return for some control over his workspace and time. The discipline of reporting to the office space and sitting at an assigned desk all day did not appeal to him. He believed his job was to complete his tasks by company deadlines and did not subscribe to the idea of close managerial control of how and in what order his tasks were completed. His quip about not needing friends at work contrasts sharply with Sharon’s friendly interactions with her team. John simply wanted to get his work done and spend time with his non-work friends. He did not mind working from home. In fact, he enjoyed being away from the office space.
As a policy expert, John was mildly irritated with a black and white approach to worker privacy. “It does not look good for a company to collect data broadly,” he explained. “They need to be clear on why they are collecting such data.” He admitted that “if there is an issue” a company might have to pull its weight and argue for the right to review data on corporate devices and personal devices holding corporate data but thought that such intrusive behavior should not be the norm.

John did not think much of separating work and non-work by carrying multiple devices. He thought BYOD was a good move for workers because of the convenience it offered.

As devices get smarter and people become accustomed to using their own devices, people would love to include their work lives on it. And why not? Everything else is there. If you have your work on your personal device, you have one less thing to carry around with you. Do you want to carry two smartphones? Do you want to carry two laptops when you travel, one for work, one for home? The other thing is being able to access [work] data in a format that you are used to and on a machine that you are comfortable with.

His views did not consider the tradeoff between privacy and convenience. He thought that privacy concerns should be navigated through negotiation between companies and workers. “My experience at Giztech is that the policy about work boundaries works both ways. The company solicits feedback about such policies and considers them. But employee recommendations are not necessarily adopted,” he concluded.
Nonetheless, he maintained his preference for integration, arguing that it was simply more practical, even for “9-5 traditional workers.” He thought the approach was good for companies as well because the system allowed workers to be more productive.

There is a blur between traditional work time and personal time. Assuming you are a 9-5 traditional worker and you leave the office after work, if you have a corporate asset, more than likely you can’t just ignore it. I always check in a few times after work, just to make sure that nothing has blown up. I think that is going to continue. I personally think that as long as the focus of the employee is on performance and not sitting at a desk, it is not a bad thing. If John had to do XYZ thing by the end of the day and I got that thing done but I was not at my desk, what difference does it make? I think it is reasonable to access company information on personal time to improve performance. I think companies can get ahead that way. I don’t think that allowing access at non-traditional times is necessarily a higher risk thing to company data.

He also thought that the risk to IT, under policies that allowed for integration, was minimal: “Since all companies are connected to the Internet, there is risk already.” He argued that the IT department had a responsibility to protect the company against security attacks and thought more companies should make integration options available to workers because it also allowed the company to save on device costs.
John’s only concern with integration was the possibility that workers would then face expectations of 24/7 availability. He thought such expectations were unreasonable because productivity was not a dependent on 24/7 availability.

The trend [towards integration] is a positive thing. Maybe it is just me but if the expectation is that you should be connected all the time, that will be negative, a loss for the employee in the long run. Assuming that the integration trend continues and the companies stop measuring time and start measuring performance, that opens a new set of ways for employee to figure out their own ways to be proficient.

Nonetheless, he thought that the trend towards integration and BYOD in particular could raise legal issues. But “clear policies” would save the day.

I think the BYOD could raise legal issues but it is better approached from a standpoint of policy. You really have to figure out how to separate ownership of the device from the company data. There has to be a policy that states: Yes, you bought the device but you need to agree that a certain part of the device, that data belongs to the corporation. Just because it is on your phone or your laptop that you bought doesn’t mean that magically you now own that asset, you own that data, the Giztech data on that asset. Part of the device, at least the way I think about it, belongs to the company. It is not 100% the same as having your own phone and doing what you want on it. It is a hybrid. The BYOD places a
burden, well that’s too strong a word, but it places a responsibility on the employee to protect [company] data.

John’s preferred autonomous approach to work (when he says: “If John had to do XYZ thing by the end of the day and I got that thing done but I was not at my desk, what difference does it make?”) raises the question of distinguishing between employees and independent contractors, a distinction that is significant for taxation and liability under tort. Control, which John seeks to avoid, is a primary consideration in determining whether a worker is an employee or an independent contractor (Steffen 1935). Similarly, Cody also observed that his new job offered him the flexibility to work anywhere and anytime, leaving him in control of his schedule. This preference for independence is important for rethinking assumptions underlying decades-old labor, tort and tax laws that associate stricter spatial and temporal boundaries with employees, and more fluid boundaries with independent contractors. As observed in chapter 2 of this dissertation, independent contractors are offered few protections under current labor law thereby making the pursuit of independence risky.

Conclusion

Among various drivers of boundary management practices, collaboration across multiple time zones was common to most of the respondents in this study. In the US alone, the variation across time zones is as wide as 5 hours—Hawaii and New York. With offices across continents, companies are working 24/7 and relying on digital workspaces to allow collaboration among dispersed workers. These digital environments of work are like the telegraph and the Internet, which Mattelart (1994) describes as “victory over time and
space.” Yet, they have not transcended workers’ bodies. The human body is still subject to the natural rhythms of its time zone and attempts to convert the body into a machine capable of working in multiple time zones without rest is dangerous. Marcia tried. She failed and adapted to a more forgiving schedule of work. So, the idea of 24/7 work (Crary 2013) should be interpreted as a framework in which workers’ contributions are constrained, not by time and space, but by the limits of their bodies and the demand for their presence in non-work spheres.

Besides the demand for workers’ physical presence in the non-work sphere, there is also a demand to fulfill tasks that merely require disembodied presence. Online shopping is one of such tasks. It integrates worker and consumer identities, which in turn draws retailers and advertisers into the dynamics of navigating space, time and data boundaries of work. The next chapter delves into the blur between the digital workspaces and consumer spaces, focusing especially on the advertising and sales strategies for exploiting the fluid boundaries of digital work.
Chapter 5

The Consuming Worker

At the center of this account of competing boundaries is the argument that employers are gaining substantial advantages while workers are facing bigger risks than benefits. However, in addition to employers and workers, other actors have a stake in the definition of work boundaries and are leveraging the blurring boundaries of work for their own purposes. In particular, retailers and advertisers have adapted to workers’ boundary management practices and leveraged the convergence of work and non-work to promote advertising and sales. So if Ira Steward thought workers needed shorter work hours to engage in the pursuit of consumerism, it was because he had no idea that the future of both work and shopping was largely unbounded—spatially and temporally. A Pew Research study found that “35 [percent] of those with college degrees make online purchases at their workplace, and fully 41 [percent] of those who earn $75,000 per year or more do so.” Bill is one of these shoppers. He indicated that he usually did his online shopping at work but between support requests. He did not think it was a problem because the legal department merely demanded responsible personal use of company time and equipment. Beyond questions about his integration preferences and the company’s preferred policies, Bill’s shopping signals the inseparability of workers’ identities from their consumer identities. It raises questions about retailers’ perception of work boundaries and their strategies for permeating work boundaries with consumer products.
In this section, I explore online shopping as a non-work activity that permeates work boundaries and cannot be ignored under a smart regulation framework. I argue that retailers have a huge stake in the construction and navigation of work boundaries and an incentive to promote the incursion of personal activities—especially online shopping—into work. I explore the notion that this seeming capitalist triumph is rendered paradoxical by the existing productivity narrative recorded in the technology chapter of this study.

Through email marketing, advertisers and retailers appeal to the consumer side of workers and promote consumerism—the belief that goods give meaning to individuals and their roles in society (Cross, 2000). Remuneration from work was a prerequisite for participation in consumerism. So, workers worked so they could have the financial resources required to be consumers. According to Cross, the combination of hedonism with work helped shift focus from the failures of representative democracy and workplace participation.

If consumerism was so vital to society, it seemed fitting that attempts to promote consumption would run simultaneous with productivity efforts in the workplace. As management found ways to expand the reach of work across time and space, retailers built a similar history with shopping. Retailers adopted various technologies to ensure that shoppers could make purchases with ease. Shoppers no longer had to make the journey to malls because goods were available for purchase online. In tandem, the financial industry and payment handlers got on board to manage the growth of online purchases using credit and debit cards. Retailers created mobile apps for shopping to take advantage of the ubiquity of smartphones and make shopping as intimate as the device. Other design decisions also appeared geared towards making purchases easier and faster. For instance, Amazon patented the “1-click” button, which allowed customers make purchases without filling out lengthy information about billing and shipping. According to Digiday, “1-click” reduced shopping
cart abandonment but Ron Berman, Wharton Professor of Marketing indicated that the “1-click” may not have been such “a game changer,” except on mobile where the combination of small screens and many clicks made purchase less likely (Wagner & Jeitschko 2017). Other retailers and grocery stores began to allow online purchases, home delivery and speedy store pickup. It meant that the busy worker could easily maintain an online status of “available” on a work application like email or Slack while making purchases on Amazon.

This tendency to shop online from workspaces or during work times has been going on for years. As early as 2005, Pew Research reported that 22 percent of employees engaged in online shopping while at work. By 2015, it was 50 percent according to Career Builder. Respondents in this study largely confirmed that they engaged in online shopping during periods, in places and on devices designated for work, thus underscoring the interconnectivity of work and consumer spaces.

To explore the unique positioning of retailers and advertisers in relation to the blurring boundaries between work and personal activities, I turn to two case studies. First, I examine Cyber Monday as a retail event that leverages the consumerism focus of the holidays and is designed to encourage and capitalize on workers’ attention to the personal while at work. Second, I examine a different and newer retail event that commanded an estimated revenue of $4.19 billion in 2018, Amazon Prime Day.

To set the stage for these case studies, I provide an overview of the email marketing service industry, a primary vehicle for communicating retail deals to audiences. I argue that email marketing services are at the forefront of understanding the level of collapse between work and non-work. These services like Mailchimp collect data on click rates of email campaigns and can sort click patterns by different variables including occupation and time of day.
The Email Marketing Service Industry

Members of Ann Taylor’s email lists are used to the occasional email, sometimes titled “Power Lunch,” offering discounts for purchases made between noon and 5pm. Given the brand’s audience of professional women, a decent number of the customers would have to shop at work to take advantage of the discount. Ann Taylor is not alone. The retail industry has embraced email marketing and services like Mailchimp that are dedicated to managing the process of sending out marketing emails have emerged.

The email marketing service industry measures consumer response to marketing emails based on the time of delivery. Company blogs like Mailchimp’s reveal the industry’s construction of workers’ interaction with online shopping while at work. While the optimization recommendations differ from one firm to another, the very activity of attempting to comprehend worker behavior in relation to online shopping is an acknowledgement on the part of advertisers and retailers of the impact such behavior has on sales.

Many email-marketing services agree that sometime between 9 am and noon is optimal for email delivery. Construction of workers’ afternoons are fairly split among those that perceive workers to be distracted after work and more inclined to shop—the category in which Ann Taylor probably falls—and those that perceive workers to be conscientious and unwilling to engage in shopping until the close of work day.

One explanation for the discrepancy in assessing employee behavior is the inability to generalize across different kinds of workers working under different conditions. There are external factors besides the tendencies of individual workers, which contribute to the differences in perceived worker behavior. First, as observed by Mailchimp’s Chief Data Scientist, employment type is an important factor in determining patterns of online shopping
during workdays. Other considerations like the existence of corporate policies, online monitoring and alternative Internet access options play a role in the development of these patterns.

Although some of the data on email campaign click rates are publicly available, retailers and advertisers are clearly the targeted audience of these reports, including those that tie the delivery time of emails to the probability that they are opened. Incidentally, these Mailchimp blogs make no reference to the impact of corporate monitoring or the existence of firewalls preventing visits to online shopping sites. In the narrative employed by the blogs, workers’ agency remains unconstrained by employer action, a perspective that is not entirely baseless. The perks race, particularly among tech companies, creates a façade of unfettered worker autonomy at the boundaries of work. I’ll proceed to examine how email-marketing companies play a role in promoting integration behaviors.

Mailchimp, which reports offering its services to over 10 million individuals and businesses, was established in 2001 and has since grown into a company with over 500 employees. The company’s self-presentation on its website highlights its attitude to the flow of non-work into work. A winking chimp logo of the company, which conveys a laid back and humorous tone, is reserved for less serious interactions and familiar audiences. Personal information about members of the leadership team’s lives is included in their profiles, which might suggest approval of the integrated nature of work and non-work. A profile might include an account of education and work experience, and the line: “She lives in Atlanta with her husband, two daughters, a dog, and a bunny.” The website maintains a personable and humorous tone in its visual depiction of the company’s employees. It shows a series of highly expressive photos including one of a person wearing a potted plant on their head. Unsurprisingly, the culture encourages company employees to take time off work in order to
volunteer and to learn new skills. The blend is not unusual for a modern company, which attempts to present itself as dedicated to employee and community development even at the price of reduced office hours. The company’s Coffee Hour series with creative “folks” and its partnership with community projects contribute to this image of work as an inclusive activity.

In addition to depicting itself as a great employer, Mailchimp its business as providing “marketing emails, automated messages, and targeted campaigns.” In line with current trends towards predictive analytics, the company provides “detailed reports” to its paid account users. These reports include optimal send time recommendations based on data about the “open” and “click” rates of the recipients of any marketing emails or campaigns sent via Mailchimp. Optimal send time recommendations change with the inclusion of additional data over time.

In 2013, Mailchimp introduced a send time optimization feature through which paid account users could access send time recommendations based on reports generated through the company’s Email Genome Project. The project uses software to analyze email lists and publishes trends and expectations. These trends are consolidated into reports and embedded in the user interface to point subscribers towards the optimal times for sending out marketing emails in order to maximize audience engagement in form of views, clicks and conversion.

Optimal send time recommendations vary based on audience demographics. The dynamic nature of the recommendations suggests differences in email recipients’ behavior due to external influences like the work environment. For instance, firewalls combined with strict spatial requirements may be responsible or causing email engagement of affected workers to drop during work hours. But this possibility and its attendant connotation of
worker control are rendered invisible in Mailchimp’s analysis. Rather, the company takes workers’ tendency to engage in personal activities while at work for granted. Based on data from billions of individual email addresses, Mailchimp generally identifies midmornings on weekdays as optimal send times and weekends as least likely to lead to audience engagement.

Relying on audience segmentation, Mailchimp makes additional recommendations based on age, party affiliation, location and occupation. Across these segments, mornings continue to hold strongly as optimal send times for email marketing.

Figure 1: Mailchimp Percent of Subscribers Optimal Send Times by Hour of Day

![Graph showing engagement levels by occupation and hour of day.](image)

Source: Mailchimp

The graph displaying engagement levels based on occupation reveal a peak of 9:30 am for lawyers. The rather high click through rate is maintained until 12:30pm, presumably around lunch, when it begins to fall rather dramatically. If the traditional 9 to 5 work period is applied to lawyers, one may presume that they are inclined to engage in technology mediated personal activity until lunchtime when they become more focused on work. The problem with this inference though, is that lawyers are probably not the best examples of 9-5
workers. Like the investment bankers described in Karen Ho’s *Liquidated*, they are known to work long and tedious hours through the night, especially at “Big Law.” Like Sharon, lawyers may simply feel entitled to engage with marketing email because they work many hours beyond 9-5.

Unlike the graphical representation of the optimal send time for lawyers, bartenders’ click through rate begins at a higher point than lawyers, suggesting higher engagement at midnight. It begins a less steep climb around 5:30am, shortly after lawyers, and peaks around 12:30pm, three hours after lawyers peak, before commencing an equally less sharp descent but never falling quite as low as lawyers. For bartenders, who presumably work after typical office hours, it appears that they are more likely to check their email and engage with advertising and retail outside of work hours than during work hours. Of course, this presumption only holds where the bartender has only one job, the bartending job.

Neonatal nurses’ engagement rates throughout the day are represented by three waves with each subsequent peak below the previous. The first wave peaks at 9:30am, the second at 2:30pm and the third at 8:30pm, which may be indicative of shift work or punctuated access to communication technologies while at work. The pattern does not unequivocally support the hypothetical influence of advertising and retail on the flow of personal activities into work since the existence of shifts, thus different groups, may be responsible for the three peaks.

The patterns nonetheless establish an important qualifier to the hypothesized relationship between marketing and work. They show that employment type affects the way workers engage with personal activities typified by engaging with retail through email marketing. By identifying the optimal send times for various audiences at work hours, email
marketers like Mailchimp assist advertisers and retailers in exploiting the fuzzy boundaries of work while workers remain unaware of the efforts to command their attention.

**Cyber Monday**

The next section considers a more visible campaign to reach through the boundaries of work and target workers with consumer offerings. Despite the popularity of Cyber Monday sales, there has been little association between work and this shopping holiday. Purportedly created by the National Retail Foundation (NRF), one of Cyber Monday’s first mentions was on November 19, 2005, by the New York Times. The author Michael Barobaro cynically compared Cyber Monday to Black Friday, describing it as a “catchy” name for a shopping holiday created by retailers to make profit on sales. The prevailing logic at the time was that people spent the Thanksgiving weekend at the mall and went to work on Monday to use employers’ high-speed Internet connection for buying items they had spotted at the mall. In what may have been prophylactic about online shopping in general, a marketing executive of a retailer was quoted as saying: “Not good for employers.”

On November 21, 2005, the NRF released a statement emphasizing the Internet access rationale for shopping in the work place. According to the statement, availability of high speed internet at work (and its unavailability in many homes), coupled with data that 77 percent of online retailers reported substantial increase in sales the Monday after Thanksgiving, led to the creation of Cyber Monday. Despite the NRF’s attempt to make the shopping holiday appear like a formal recognition of an existing shopping behavior, naming the sales day spurred even higher sales.

This self-fulfilling prophecy persists despite the fact that a key element of the creation of Cyber Monday, the availability of high-speed Internet at work and not at home, is no longer
Pew Research reports that 65 percent of Americans have high-speed Internet access in their homes, up from 1 percent in 2000 (Pew Research 2018). The average home broadband speed has also increased from about 3.6mbps in 2007 to about 18.75mbps in 2017 (Akamai Technologies, n.d.) Thus, the argument for capitalizing on the availability of better Internet access in the office is rendered moot. Nonetheless, Cyber Monday persists as an example of the coopting employer devices, networks, work time and space for the purchase of personal items online. In 2018, digital sales for Cyber Monday came to a total of $6 billion, up from $2.6 billion in 2014 (comScore, n.d.).

Desktop sales in particular have represented more than half of overall Cyber Monday sales since 2014, lending credence to the idea that workers are shopping these sales while at work. Advertising data analysts agree that mobile web browsing activity dips during two windows: “sleeping hours”—12am-8am and during work hours, between 11am and 5pm. The patterns suggest that people switch their online activities to desktops during work hours.

The continued rise in Cyber Monday sales over the years is evidence that the marketing strategy of finding and targeting the consumer lying within the worker was a genius move for retail and advertising. Given the sustained rise in desktop sales in particular, a link could be made between such sales and workplaces. Cyber Monday statistics from Shopify indicate two shopping peaks—11am – 12 noon and around 9pm (Shopify 2018). The first peak supports Mailchimp’s finding that weekday engagement rates peaked between 9 am and noon while the second peak can be attributed to last minute attempts to secure deals. The concurring reports indicate that patterns of online shopping at work are not restricted to holiday shopping or Cyber Monday in particular but that online sales events are a merely amplified snapshots of employee patterns of integration that also manifest at other times of the year.
Employer Response

Surveys by various employers and human resource organizations like the Society for Human Resource Management show that employers have adopted varying responses to the habit of online shopping while at work. 55 percent of the employers surveyed indicated that online shopping was permitted but only during lunch and breaks. 32 percent indicated that it was outlawed while 13 percent indicated that it was allowed as long as the shoppers got their work done on schedule.

According to Robert Half Technology, one of the world’s first and largest temporary staffing companies, the number of employers that engage in blocking websites reduced by 8 percent between 2012 and 2015. Nonetheless, 24 percent of the employers surveyed by Career Builder had fired a worker for online shopping while at work (Career Builder, 2016). By 2018, Robert Half reported that over 76 percent of employers allowed workers to shop at work; a practice described as “workshopping” (Robert Half, 2018).

Although employers concerned about “workshopping” cite productivity and cyber security as primary risk factors, the practice may in fact benefit them. It offers an alternative to taking more time off work to physically attend to non-work demands. In addition, offering free rein accords with attempts by employers to avoid very strict rules that may adversely affect the productivity of workers like Bill who hate to be micromanaged. In essence, employers may permit “workshopping” to create an accommodating environment, which in turn gives works fewer reasons to leave the office space on personal errands or hurry off after work. As Elena noted in the previous section, her boss at the music agency had high expectations particularly because he offered a fairly laid back environment that included watching Netflix when there were no urgent tasks. Cody also put in extra hours because he felt in control of his schedule and liked his work. Similarly, Sharon willingly put
in extra hours because her manager allowed her to freely engage in non-work activities at work. In the converse of this bargain, workers like Dave attempt to reciprocate their employers’ strict approach to spatial, temporal or data boundaries of work by preventing work from spilling over into their non-work lives. Even for these workers, clear boundaries are hard to maintain.

Retailers and advertisers take advantage of the difficulty with maintaining clear boundaries between work and non-work. They harness workers’ tendency towards shopping online and generate huge profits thereby. In shopping, retailers offer workers an activity through which workers can enjoy the freedoms offered by their employers or thumb their noses at strict employers’ attempts to cordon off certain times, spaces and devices for the exclusive performance of work. In addition to online shopping sites, workers can visit gaming websites, social media websites or other random sites on the web, which all tie into the service of consumerism and ultimately, corporate profits.

The alliances and disunities formed over the phenomenon of “workshopping” highlight the challenge with bounding actors in the labor space into neat categories with fixed alliances. These actors are networked and adaptable. Retailers may appear to be accomplices to workers’ seeming unproductivity but as corporate actors, they are in fact sympathetic to corporate concerns. Like employers, retailers and advertisers are inclined to collect data on “work shoppers.” By targeting consumers at work, retailers and advertisers are able to collect additional data about work patterns while employers are presented with data on their workers’ buying habits. Meanwhile, the work shoppers get to freely transcend spatial and temporal boundaries.
Amazon and Prime Day

At the center of the practice of workshopping is Amazon, a company that has cornered the online retail market. Amazon began business in 1995 as an online bookseller. Since then, it has grown to become the largest online retailer in North America. In 2017 alone, its net sales revenue was about $178 billion and its e-commerce net sales of $52,804.9 million was about four times the size of the next most popular online store, Walmart (Statista 2017). Amazon also had about 197 million daily website visitors, compared to Walmart’s 127 million.

Prime Day, a sales window of about 36-hours, was introduced in 2015 and has been held every year since then. Although the biggest sales in the US are held around the end of the year, Prime Day holds in July. Amazon was not the first company to start sales in July though. Many other companies offered summer sales but Amazon was a different type of retailer that functioned as a platform as well, connecting third party sellers to buyers. Prime Day is restricted to Amazon Prime Members—customers who pay $119 on an annual basis for two-day shipping, exclusive access to Prime Videos, and other perks like reduced membership of the Kindle library. In 2017, Amazon had over 100 million paid Prime members.

Like Cyber Monday, during which Amazon captures a large volume of the sales as well, Amazon has scheduled every Prime Day since inception on a weekday. Despite the membership requirement, analysts project that the 36-hour sales were worth about $1 billion in 2015 and $4 billion in 2018. In response, some retailers like Walmart tried to push their own sales around Prime Day by highlighting the lack of a membership charge but Prime Day sales have continued to climb.

In addition to sales, Prime Day operates as a form of reward for Prime membership and a marketing campaign of sorts for new members. By advertising Prime Day, Amazon was
promoting platform loyalty amount buyers and among sellers as well. The 30-36-hour sale period assures sellers of a receptive buyer market while it guarantees buyers good deals on a range of products. In summary, Amazon Prime Day was not only about offering reduced prices on Amazon products, it also compelled third-party sellers to offer deals as well, as they weighed the size of the Prime Member market. The platform presents a two-sided approach to network effects—additional Prime Members made the market more attractive to third-party sellers and \textit{vice versa}.

Despite Amazon’s success at targeting workers in digital workspaces with consumer goods, reports suggest that the company may be less tolerant of its own workers engaging in non-work activities during work hours. In 2015, the New York Times published a story about the work culture at Amazon, where workers described as “amazonians” or “amabots”, worked 80 hour weeks and received emails after midnight, followed by text messages demanding responses to the emails (Kantor & Streitfeld, 2015). For these workers, work boundaries are expanding to consume the non-work realm.

\textbf{Conclusion}

Online shopping in workspaces shows how other actors besides employers and workers are invested in the construction and navigation of work boundaries. It highlights the intersection of work boundary construction with marketing and sales concerns. There are other activities that workers may choose to pursue within the traditional boundaries of work, including gaming, online banking, and messaging friends. However, the data-driven decision to send marketing emails during work hours and the decision to schedule the biggest sales for weekdays, point to deliberate strategies to leverage integration technologies and tendencies to promote engagement and sales.
These marketing strategies that treat workers as consumers in digital workspaces threaten employers’ claim to ownership of work time and the vision for productivity. Although the findings from the analysis of corporate codes in chapter 3 indicate that workers are largely tolerant of integration, the vague definition of integration limits helps to retain the possibility of disciplinary action. The strategies for promoting consumer sales in workspaces also exposes more data from which employers may draw accurate or erroneous conclusions that inform discriminatory practices against workers. The blurring boundaries of digital work have thus precipitated a collapse between worker and consumer identities, providing watchful employers with richer data troves. The risks of discrimination arising from data retailers collect has generated a lot of interest from consumer advocates but integrating consumer and worker data in the workspace portends far greater risk to workers whose livelihoods are at stake.

But retailers and advertisers are not affected by the risks to workers and have an incentive to encourage consumer engagement and purchase even if it means entering the work sphere. Online shopping at work has adapted to digital workspaces by offering online shopping options, speedy delivery, in-store pick-up for online orders. They have exploited the intimacy of the mobile device to promote mobile applications that lead customers through the purchase path speedily. Retailers have calculated the best days of the week and times of the day to send marketing emails to maximize conversion rates.

Are there ways to protect workers’ interests despite the exploitation of work boundaries by retailers and advertisers? One option is to turn to regulators who have a responsibility to create labor laws. Currently, there is a wide gap between the assumptions underlying laws of work boundaries and the idiosyncrasies of digital work. While there is little indication of impending policy changes, the technical features of digital workspaces offers the possibility
of an alternative type of regulation. Drawing from the logic that code is a form of regulation, the next chapter explores the digital environment of work and highlights how its affordances and constraints contribute to promoting particular perspectives on space, time and data boundaries of work.
Chapter 6

Picking Sides: Software & Buzzwords

We’re helping people do their work better and we’re helping to make it **more fun**

Carol Bartz (1997), CEO Autodesk

What would it look like to bring more humanity, fun and delight into the tools we use for work?

Christina Janzer (2018), Research Director, Slack

This chapter is about tech power and work boundaries. It addresses the software-assisted move by capital and consequently labor to the cloud. It explores the nuances of struggles for control not just about boundary-defining enterprise software but within the resulting digital environments. It shows how software architecture reflects imaginaries of work boundaries held by technologists who align with employers to boost their software sales. While existing literature implicate digital media in arguments of overwork, in this chapter, I go further to examine specific software and show how they reflect employer control.

Software, as defined by Dodge & Kitchin (2005) consist of “instructions and rules that, when combined, produce programs capable of complex digital functions that operate on computer hardware.” Software, considered in this study exhibit such complex digital functions that they create entire digital environments for the performance of knowledge work. I propose that through transduction (transformative capacities) and technicity
(productive power), enterprise software affect the conception and performance of work in society. Enterprise software's impact on work is not removed from technology’s historical influence on work. Different devices like the conveyor belt were designed to achieve management goals of control. Communication technologies were also relevant to the system of control in organizations (Yates 1993) but scholarly accounts of control through communication are mostly situated in the 20th century, leaving software-based enterprise communication largely analyzed from an industrial research perspective.

Perhaps the pre-existing technology most relevant to the ubiquity of enterprise communication software is the computer in its current varied forms (including the desktop, laptop, tablet and smartphone) with the mobility feature being very pertinent to its widespread use among workers. Initial computer models held little promise for a future of device mobility. The Electronic Numerical Integrator and Calculator (ENIAC), created at the University of Pennsylvania, occupied over 1000-square feet and had about 18,000 vacuum tubes for controlling the flow of current. A subsequent computer, the commercially produced Universal Automatic Computer (UNIVAC), though smaller than ENIAC, was a room size machine as well. Subsequent computer models continued to be used mostly among scientists and academics until the creation of personal computers like the IBM 5100, TRS-80 and Apple I & II.

In 1983, Gavilan SC pushed device mobility further with the design of the modern laptop and in the phone market, Microsoft, Research in Motion, Palm, and Nokia dominated until the introduction of the iPhone and Android mobile operating system in 2007. The history of the tablet is filled with various iterations of devices not described as tablets at the time but smaller than laptops and larger than mobile phones. One of the earliest tablet-like
Mobile devices set the stage for software that facilitated the mobility of work by getting users comfortable with constant use and mobility of their devices. Statista reports that in 2015, people in the US spent an average of 132 minutes on their laptops and 177 minutes conducting non-voice activities on mobile devices. With users connected to their devices for such lengths of time, constant use of software applications becomes easier. By installing enterprise software on personal devices, workers are by extension, intimately and constantly connected to work. Intimacy with mobile devices and the growing demands of work led to the rise of Bring Your Own Device (BYOD) policies, which may be interpreted as workers’ preference for their own devices or corporate exploitation of the intimacy users share with their hardware.

A cursory look at the plethora of enterprise software in the current knowledge economy suggests that communication is the mainstay of today’s organizational operations. It rises above mere letter and memo writing and is described as “collaboration,” a term that has become a buzzword in companies. The hype about collaboration is jointly promoted and exploited by consulting firms and enterprise technology companies. For instance, Deloitte published a white paper describing collaboration as “the future of work” and predicting the rise of collaboration tools (Redwood, Holstrom & Vetter n.d.). If collaboration is the future of work, as Deloitte predicts, the future is taking its cues from the past.

As early as 1987, Fortune Magazine published an article titled “Software Catches the Team Spirit.” “Software that will enable people collaborate across barriers of space and time is one of today’s hottest frontiers of computer research,” the article stated. Described as
groupware at the time, supporters employed language that seems so familiar in current times, predicting that the technology would “revolutionize” the way work is performed.

Yates and Van Maanen (2001) observe that arguments for the adoption of collaboration technologies in the late 80s and early 90s defined work as a “social endeavor.” Although software like Slack did not exist at the time, proponents of collaboration encouraged the adoption of technologies like screen-sharing software and group-authoring tools. They described their proposed model of work as Computer Supported Cooperative Work (CSCW) and tried to sell associated technologies. However, adoption was slow and the technologies did little to improve hierarchical work environments. With the growth of distant work, “performed in a location different from that of the supervisor, subordinate or fellow team member,” CSCW technologies like Lotus Notes were adopted not in the hopes of flattening organizations but to connect otherwise disconnected distant workers to their managers or teams. But collaboration proponents have resurfaced, pushing a new set of technologies and attracting business and media attention.

Communication is the essence of collaboration and consists of both a “structure” and a “process” for resolving problems and exploring new ideas (Keyton, Ford & Smith, 2008). Embedded in the construct is the idea that collaboration is a volitional, largely informal and preferably non-hierarchical activity that involves multiple people. However, the imaginaries of collaboration can be divorced from its reality. Despite the preference for equalization of status, there are varying levels of power in any group. Similarly, collaboration presupposes the involvement of the people affected by the subject and outcomes of collaborative efforts but decision makers are often a small part of a large group of stakeholders. Likewise, collaboration may be imposed on participants and subject to formal rules. In essence, the ideal of collaboration may look very different from its instantiations in various contexts.
This chapter treats collaboration as a manifestation of organizational control by employers and subscribes to the idea that information processing and communication systems are inseparable from structures of data collection and control within workspaces (Beniger 2009). It treats two popular enterprise software applications, Outlook email and Slack, as case studies of technology’s effect on work boundaries.

**Email**

“Email is slowly replacing the office memo”, wrote the Times on August 14, 1992. In that article, the Times describes affordances of email systems in terms of the offline world. Given the newness of the technology, such analogies were necessary to convey meaning but have remained persistent in the design and discourse of the technology. According to the Times, “Email systems allow a PC user to have an electronic mailbox a storage address on a central computer into which messages or even large documents can be placed.” The definition captures the essence and materiality of email, despite the shift to cloud computing, which in its basic form is an offsite computer run by someone else. Email offers a rudimentary digital structure for engaging in the reciprocal communication that underlies controlled collaboration. It can support conversations between two email addresses and can be expanded to include multiple addresses as well. It has become the backbone of digital communication in virtually every conceivable context. Other digital services rely on email addresses as unique identifiers in sign up processes. Even the move towards using Facebook log-in information to sign up for other accounts is still reliant on the email sign-in for Facebook.

The mundanity of email informs the critical role it occupies in communication and software based collaboration. Its history as a joint creation of academia and defense research
is well known but its entry into corporate communications is not. At the time of email's creation in the 1970s, the telephone and fax ruled the world of organizational communication. Invented by Alexander Bain in 1843, the fax rose to become a particularly important corporate communications equipment. In 1997, over $1 billion in fax machine sales were made in the United States (Statista). Over the next decade, revenue from fax sales declined over 90 percent (Statista). The development of fused machines for scanning, printing and faxing helped the fax industry revenues due to sales of about 7 million of such machines in 2001.

Unlike telephones, fax machines allowed messages to be sent rapidly, while maintaining a documentary trail, (Coopersmith 2015). But email offered similar benefits and even evolved to allow file attachments, spelling the beginning of a downturn for the fax machine. But the fax was recognized as a legal method of transmitting signed documents, a status that electronic signature of documents to be sent by email did not possess until the Electronic Signatures Act passed in 2000.

Over the years, email became the default mode of communication in organizations. Many studies on communication and networks in organizations relied on email as a measure of levels of communication. Nonetheless, some supplementary methods of communication, especially instant messaging, began to emerge in two major categories. Some companies developed instant messaging tools for sale to organizations while some organizations developed their own instant messaging tools for internal use. The tools continued to proliferate for years, without ever gaining the traction of email.
**Outlook Email**

Microsoft’s email service Outlook is one of the popular enterprise email services. Its popularity is tied to its inclusion in a suite of Office products including Word, Excel and PowerPoint, which are essential to knowledge based office operations. It is also a cloud based service, offering users the capacity to access emails on a variety of devices.

Outlook email offers an advanced a memo style layout for sending emails. The required fields include the recipient(s) address, alongside a subject line. The close similarity to memos suggest a flow from 20th century paper-based communication to the digital environment. Familiarity is preserved in the absence of tangibility by reproducing the appearance of the memo albeit in digital form. And delivery is achieved by electronic means, same as storage and organization by clicking folder image icons. Attachment icons are represented by the paper clip image. The act of deletion is digital as well, with a trash can symbol as the deletion icon. The act of mirroring the physical can be regarded as an attempt to ground digital actions in the realm of the physical and to build up familiarity with the digital environment of work.

Unlike the physical office where files are organized in cabinets (Yates 1993), the email environment allows messages to be searched without any regard for the organizational capacities of the user. Folders are offered for more advanced users to group their mail but a simple function of searching all folders can return results for any search a user may conduct. Email also automates some actions to aid communication. For instance, rather than compose a new email and fill out the required fields to send a reply, sender of the email to which a user wishes to respond is simply moved to the recipient field and the original title of the email is reproduced in the subject field with the requisite “RE:.”
Email is asynchronous so receipt and reply are separate events that can be conducted at the convenience of the relevant parties. Nonetheless, some workers feel immense pressure to respond to email as though it were synchronous. It retains a strong connection to time measurement through the time stamp on each email. Like the rest of the digital world where productivity, influence or worth is measured in quantifiable terms, some workers measure their productivity by what they term “responsiveness”—the speed of email responses. For instance, a respondent in this study, Marcia, described email as a source of anxiety. She found herself compulsively responding to emails as they arrived her inbox and when she tried to do other things before responding, she found herself mentally composing responses. Other workers, like Dave, formed rules of email response for themselves, claiming 24 hours as the longest possible time between receipt and response. He often browsed through his inbox a few times a day to determine whether anything required his immediate attention and was quite comfortable suspending replies until hours or even a day later.

It is not only in time records that email offers a glimpse into the culture of quantification in the digital age. The number of emails in the various folders of a user account is also indicated, leading some to measure their work by the number of emails in their inbox. Email has thus become a signifier of work, generating in some workers an intense hatred of email and the communication labor it represents. But workers still recognize the utility of email, often saying that it is a form of record keeping and can be used as a form of defense during internal investigations. It is this evidentiary quality of email and its text-based form that sets it apart from phone calls.
Workstream collaboration market

A few decades after the Times declaration that email was replacing the office memo, another software sought to overthrow email from its dominant position in the corporate world. A major change occurred when Slack came into the mix. It initially offered primarily text-based communication like email. It quickly garnered a lot of use among teams both in organizations and among non-work groups. With over 9 million users per day, the company’s valuation rose to $7.1 billion mid 2018 (Griffith 2018 New York Times), indicating that its collaboration model was well received by users. Office group chat functionality as a general product was not responsible for this level of interest since prior products like Yammer and HipChat did not quite attract such wide usage or valuation levels.

Figure 2: Number of users on Slack, from February 2014 to May 2018, by paid status (in 1,000s)

Source: Statista; Slack; TechCrunch
Prior to Slack’s launch in 2014, some of the various options for workplace communication were primarily email, phone calls (video and audio) and instant messaging. Yammer, an enterprise social network, which had served as the internal communication tool of the genealogy company, Geni, was being offered to other companies. Microsoft eventually acquired Yammer and made it available as part of Microsoft Office 365. Despite the inclusion in Office 365, Yammer’s active daily user numbers were never disclosed, presumably because they were not quite as impressive as Slack’s numbers came to be. Also, Yammer was not considered a separate from Microsoft’s Office Suite and as such did not generate sustained individual interest.

Slack had a similar market entry story. It came out of the game company, Glitch, as an internal communication tool and was later offered to other companies. It has not been acquired by a bigger enterprise company and is thus not at risk of being lost in a suite of other enterprise products. An added advantage of this standalone quality has been attention to the single product, rather than the company or a suite of products. Also, unlike Yammer, Slack quickly evolved to become a platform—software on which other applications can be built.

But before Slack, Yammer and other similar enterprise products, companies simply had internal webs operating as knowledge archives. The history of internal webs is connected to the rise and spread of the Internet. In 1995, Alison Sprout, writer for Fortune Magazine provided a dual perspective on corporate use of the Internet.

The Internet probably deserves its abysmal reputation among business executives. They're barraged daily with hype about the World Wide Web, the Net's flashy multimedia strip, with its glitzy movie clips and virtual shopping malls that are even less
appealing than the real thing. At worst, the Web is an expensive way to promote your company to an anonymous audience without getting measurable results—as well as an invitation to employees to goof off. But a growing number of companies are discovering that the Web isn't entirely useless. By applying its technology for sharing information in their own corporate networks, they're creating internal webs that finally let computers work the way they are supposed to.

The internal webs are early templates for the insular nature of enterprise collaboration tools like Slack. As digital environments of work and platforms for other enterprise applications, these applications aim to offer workers all the work tools they need without leaving the platform environment. Although Slack functions like the internal webs in Sprout's writing, some non-work activities can still be ported to these platforms. For instance, Suplexed, a third-party application on Slack allows users to check sneaker prices within the Slack environment; Wikibuy, also a third part application on Slack provides pricing and coupon information to users. In addition, where access to the Internet is unrestricted, workers can “goof off” in their browsers, while keeping an eye out for tasks that may arise in the internal corporate system.

But Slack is not an internal web system. It is not email but it is not merely chat. It offers video calls but it is not merely video-conferencing software. It competes with email, chat, phone and video calls but it is neither and yet most of those things. Gartner offers some form of classification and describes the product as “a workstream collaboration solution, which, at its core, enables chat-driven collaboration for teams” (Dewnarain, O'Connell, Gotta 2017). Slack is recorded as instrumental to promoting the workstream collaboration
market and as at October 2017, held over 70% of the workstream collaboration market share.

Notwithstanding Gartner’s classification as a workstream collaboration solution, Slack continues to pose a definitional problem. Most of the participants in this study described it as a collaboration tool, suggesting a common language of collaboration among knowledge workers. Others referred to Slack as a chat. Is it social media, an instant messaging tool, a platform, or a collaboration hub? I propose that Slack is all of these and for the purposes of this study, operates as a digital environment for work. It is a social medium because it connects members of teams or organizations and offers the functions that have come to be associated with social media, including the ability to post and change statuses, send direct messages, post public messages—including photos and videos—and see when people are active on the medium. It also functions as an instant messaging tool, offering synchronous communication among team members. As a platform, it screens various third party applications and integrations before they are offered in the Slack app directory, acting as a gatekeeper of sorts to the work environment. As a collaboration hub, it functions as a central location with various applications, and data required for performing work. By selling its identity as a collaboration hub, as it has done in recent times, Slack emphasizes its role more as a coordinating platform for work than as a messaging product.

The emphasis on collaboration also points to the propensity for the business industry to use buzzwords for stickiness with audiences. Slack Technologies Inc. publishes various posts and videos about its relevance to work and best practices for use. In 2016, the company had a video on its website describing Slack as “a new kind of messaging for teams.” By 2018, it had moved to describing Slack as a “collaboration hub,” emphasizing its platform’s ability to bring the numerous enterprise applications together in one place for easy access and use.
As a platform, Slack has hundreds of third-party applications in its directory, including Google Drive, Microsoft OneDrive and Twitter. The platform business model is not new. In fact, it is the bedrock of many businesses in this post-industrial age. Facebook functions as a platform for social interaction and offers third party applications as well; Uber and Lyft operate as platforms for drivers and passengers; and Task Rabbit and Up Work connect workers to those hiring for projects. In the same vein, Slack platform connects customers and users to other applications that can augment their use of the Slack product. One way to understand Slack’s gatekeeping role is to think of it as the Apple iOS and other enterprise applications as the apps found in the App Store. App developers for the Slack platform are not required to go through Slack review and list their apps in the directory but listed apps have the added advantage of discoverability, which is essential for unknown developers looking to appeal to an audience of Slack users.

After more than a year of market dominance by Slack, on November 2, 2016, Microsoft launched Teams. In response, Slack CEO took out a full-page ad in the New York Times to “welcome” Microsoft. The move, reminiscent of Apple’s message welcoming IBM to the personal computer market, was self-described as “friendly advice.” It was in fact a sales pitch as well. In the letter, Slack outlined the various attributes that made its product and company successful including craftsmanship and thoughtfulness, a commitment to an open platform and responsive customer service, which it described as “love.” Using words like “love” and “happiness,” the letter adopted a tone atypical for business communication, especially in a b2b market. It described Microsoft’s entry into the market as “a little scary,” claimed that “playing nice” is not Microsoft’s style and signed the letter as “your friends at Slack.” The letter took a fighting stance towards the end when it stated, “one final point: Slack is here to stay.”
Microsoft’s entry into the workstream collaboration market validated Slack’s product. As a technology giant with over $85 billion dollars in revenue at the time, its entry indicated that workstream collaboration products were of value to companies and there was potential for market growth. The “scary” part was that Microsoft Teams was being added to the Office Suite at no additional charge and although Slack was performing quite well, having bagged accounts like IBM and LinkedIn, competing with a product that was an add-on for most companies’ Office subscription was going to be a challenge.

But as outlined in the letter, Slack had a lot going for it. Its design was friendly and offered use guidance through its colorful architecture. Also, at the time of Microsoft’s arrival in the market, Slack had listed over 750 third-party apps in its app directory and maintained an open source platform, allowing companies to develop and operate thousands of their own applications on it. It also engaged with users in easy banter on Twitter, during an outage that lasted over three hours on June 27, 2018, perhaps demonstrating the “love” it describes in the letter to Microsoft.

Although Microsoft is Slack’s most notable competitor, it is not alone. Facebook launched a workplace social media product—Workplace—prior to Microsoft Teams without rousing a public reaction from Slack. Workplace was not a formidable threat for a mix of reasons. First, Facebook had a self-created challenge with entering the enterprise market. Its brand’s association with leisure was so strong that when it released Workplace, initially called “Facebook at Work,” it was treated as a paradox in the press. The Guardian covered the release, with an article titled “Workplace: Now you can use Facebook at Work – for Work” (Thielman 2016). Also, unlike Microsoft, an enterprise giant, it was Facebook’s first foray into the enterprise space. Facebook’s biggest challenge was also an advantage of sorts because Workplace simulated the leisure version of Facebook very closely and posed little to
no learning curve for workers. It was a familiar application and was adopted by companies like Starbucks, Walmart and Spotify.

Apart from giants like Microsoft and Facebook, Slack also faces competition from smaller companies like Symphony. Symphony offers the same features as Slack but to an audience of companies in highly regulated industries like financial services. Its enterprise customers include Bank of America, HSBC, J.P. Morgan, Morgan Stanley and Black Rock. According to the product site, it offers better compliance for companies in regulated industries by allowing them to create information barriers, set up information privileges, monitor conversation closely and export content into regulatory record archives.

The workstream collaboration market is closely connected to the larger market for enterprise software, which has a large supply of applications. With over 1000 third-party applications on Slack platform alone, there are numerous tools for organizations and workers to adopt in their work; maybe a little too many as Bill, a worker at Cisco noted. Unsurprisingly, Slack redefined itself as a collaboration hub instead of a messaging app highlighting its platform features over its product features. In its role as a collaboration hub, it brings thousands of enterprise tools together for use in the workspace and leverages its messaging feature for communication.

Slack

The first site of inquiry into Slack for purposes of this study is its website which displayed the following message, “Slack: Be Less Busy” (www.slack.com 2016). The site, which had multiple homepage displays, described the product as a messaging app. In one instance, it was “for teams who put robots on Mars;” in another, “for teams who are changing the world;” and in the third, “for teams who see through the Earth;” all three with emphasis on
the antepenultimate and last words. Each description is accompanied by a different image and location information for the relevant team. The first option is accompanied by the image of Curiosity Rover, with a place icon stating “Mars Milky Way”. The second is an image of water droplets representing Charity: Water and a place icon stating Malawi, Africa. The third, is a structure described as Icecube Neutrino Observatory at the South Pole, Antarctica. The various displays situated Slack in the company of highly achieving, socially impactful teams not traditional office work. Curiosity Rover is part of NASA’s Mars Exploration Program to study the planet’s “habitability” (nasa.gov 2018). Charity: Water is a non-profit organization providing clean water and sanitation to developing countries.

**Users vs. Customers**

Slack creates a workspace for each team. The process of creating a Slack account begins by identifying the relevant workspace one is trying to join. Because workspace URLs can be hard to recall, users are also offered the option of receiving a list of workspaces associated with their email. In essence, the process of joining a Slack workspace is inextricably tied to email. Moreover, invitations are required to join workspaces. For public Slack communities that are not quite organizations, interested members can use self-service pages to secure invites. For instance, the Philly Startup Leaders is a public group that allows interested members to secure invites by submitting their email addresses.

The arrangement of Slack into workspaces highlights an important departure from the logic of social media like Facebook and Instagram, which usher users into the expansive platform without an obligation for group membership. Slack, on the other hand, situates invited users in pre-existing workspace units so users cannot simply create Slack accounts...
without an invitation to a specific workspace unit. Each workspace unit is created by a customer who usually functions as the primary workspace owner and issues invites to users.

This distinction between users and customers is legally and theoretically significant. Slack’s Customer Terms of Service define “Customer” as “the organization that you represent in agreeing to the Contract.” It further states “If your workspace is being set up by someone who is not formally affiliated with an organization, Customer is the individual creating the workspace.” Users on the other hand are invited by a customer to join a specific workspace. As a result, users are generally subordinated to customers. Slack makes it clear that a user is only in a Slack workspace “at the pleasure of the relevant customer.” More importantly, any data, including messages and files, submitted to a workspace by a user is automatically regarded as “Customer Data.” Slack emphasizes that “Customer Data” in each workspace belongs to the customer, not the user. As a result, customers may disclose, modify or delete data contributed by users to workspaces without recourse to users. In the absence of additional contractual terms between customers and users, the arrangement of customer and user rights, based on Slack’s Terms of Service, reduces the likelihood that users can assert the existence of a reasonable expectation of privacy in personal data submitted to Slack workspaces. In addition to the questions of data privacy, the arrangement also poses questions about intellectual property rights. Where the details of an invention or work of art are included in a Slack workspace, would the intellectual property rights reside in the customer despite evidence of creation by a user? Such matters are likely to depend on the nature of the relationship between the user and the customer as well.

Theoretically, Slack’s separation of customer and user identities taps into critical models of understanding social media platforms. Concepts like audience labor are premised on the idea that platforms do not generate content but rely on user-generated content to capture
user attention. User data and user content are then used by the platform to inform data analytics efforts geared towards market segmentation and targeted advertising. This business model has led some to the conclusion that users are the product platforms sell to advertisers and retail companies—the true customers.

Unlike Facebook and Instagram social media models, Slack does not show ads. Its revenue is subscription based. However, subscriptions are paid by customers not users, which explains the subordination of users to customers. In the same way that user data on social media like Facebook are collected, analyzed and acted upon for the benefit of retailers and advertisers, user data in Slack workspaces are acted upon, in a different manner, for the benefit of customers, who are often companies.

The language of Slack’s terms, its design and pricing structure suggest a preference for corporate customers over individual customers. Slack’s Customer Terms of Service refers to customers first as organizations before considering individuals that may also fall into the category. Also, the company specifies that where the creator of a workspace uses a corporate email domain to sign up for Slack, the creator’s organization is regarded as the customer and not the individual creating the workspace. For instance, if as an employee of Random company, a fictitious person, Chun decides to create a Slack workspace, using his work email, chun@random.com, Random would be regarded as the Customer and workspace owner. Although Chun may control the workspace settings, Random can decide to replace Chun as its representative with ultimate authority for the workspace.

The emphasis on the distinction between corporate email domains and personal email also highlights an implied preference for separating work from non-work. Although the arrangement may be ideological—Slack has a welcome message, “work hard and go home” that suggests a dichotomy between work spheres and non-work spheres—it has practical
purposes as well. First, the pricing information reveals three graduated tiers of membership for teams. The first is free while the second and third cost $6.67 and $12.50 per month for each active user respectively. Individual workspace creators are likely to select the free option because of its semblance to other unpaid social media. Organizations on the other hand are already used to paying for enterprise communication software and are more likely to select a paid subscription. Moreover, the free version of the product offers such limited functionality that organizations are more likely to find a need to upgrade to a paid subscription to secure more data storage space for users, external access for guests, more options for user authentication, compliance, administration, calls, search and technical support—all legitimate needs of a company, which may not be as important to non-enterprise customers.

The metaphorical treatment of audience labor in the social media context—that is treating content creation and platform engagement as analogous to labor—is unnecessary in the enterprise media context because the latter is explicitly described as a labor site. In the capital-labor relationship that exists in customer organizations, Slack, like other enterprise technologies is a site for structural and tactical control and resistance. Given the structure of content ownership and control of the workspace, companies as customers occupy more privileged positions than workers as users. The role of technologies like Slack in power arrangements does not translate into a vesting of the responsibility for disciplining labor in the information age. Rather, they are apparatuses through which labor can and is being disciplined by capital interests. They situate themselves as mediators between and among organizational hierarchies, therefore mirroring them.
Product features

Slack’s interface lists 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 shared interests or job duties that require 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 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 possible for users to stay connected to their work and teams on various devices.

Figure 3: Sample Slack User Interface

Source: Slack
Upon entry into the user interface, Slackbot, a chat-based digital assistant within Slack offers use tips for navigating the Slack environment. Slackbot is listed under as a contact under the direct messaging section. Users can ask the bot questions and receive guidance. For instance, I asked Slackbot through text, “How do I set a reminder?” and received a response in a few seconds.

Figure 4: Slackbot Exchange

Source: Slack

Marketing Message

One way to understand how Slack positioned itself as a product for teams is to examine the various texts and videos published on its website. A video tour of the app, located by through the “Product” hyperlink at the footer of the page, outlines the company’s description of the application’s features. The transcript, divided into thematic sections is below:
Introduction

Welcome to Slack. Slack is a new kind of messaging for teams, bringing all your communication together in one single place and integrating with the tools you already use.

Unique Value Proposition (USP): Channels

What’s different about Slack is that team conversations are organized into channels. You can create channels for departments, projects, office locations, anything you like. Public channels are open, so anyone on your team can pop in to see what’s going on, and join the conversation.

File Sharing

It's not just about messaging, though. You can also share files: images, PDFs, documents, spreadsheets. Look, I’ve got them right here. You simply drag and drop them into the right channel… like that! [Drags and drops a file]

Review and Confidentiality

You and your colleagues can add comments along with the document, making collaboration more contextual, transparent, and efficient. If you have a project that’s confidential, you can create a private channel and invite only a few people. Only the people you invite to the channel will be able to join.

Direct and Group Messaging

And if you need to reach someone directly, you can send them a Direct Message. It's totally private and secure. You can also send a message to a group of people. It’s a great way to communicate with your teammates in a short-term, lightweight way.
Notifications

By the way, if you’re offline, in another application, or just doing ‘research’, Slack can notify you when an item needs your attention. Let me get right on this…

Archival Properties and Search

Everything you post on Slack is searchable — messages, notifications, files - even the content within those files. See, there it is!

Plugins

Now, about those integrations I mentioned earlier. Well, with Slack, you can plug in many of the tools and services you already use, and have notifications from those systems appear in whatever channels you choose.

Devices and Mobility

Best of all, Slack works the way you work, so if you’re on the go, you can start a conversation on your desktop and pick it up on our mobile device. Everything’s in sync.

Results

More productive. More transparent. More efficient. And no more email. That’s Slack.

Productivity in Email and Slack

“More productive. More transparent. More efficient. And no more email. That’s Slack.” This line from the video tour of Slack sums up the company’s positioning in relation to email, at
least at the time of the video in 2016. The desire to enhance productivity can be traced to Taylorism. Productivity, another business industry buzzword is often measured in relation to time, a very simplistic approach when applied to complex knowledge-based tasks. For physical assembly tasks like factory labor, it was easy for Taylor to break work down into a series of timed movements and require certain work speeds and outputs from physical laborers. For those who considered themselves artisans, such reduction of work into a series of timed mechanical movements amounted to deskilling. Among knowledge workers today, the measure of productivity is often tied to visibility. As one of the participants in the study remarked, it [productivity] was about being visible at work, both in physical spaces by looking busy or convening meetings and in digital environments by initiating communications and responding with immediacy. It appeared that even in the absence of real tasks, the eternal task of the worker was performing productivity.

In addition to measuring productivity by time, organizations have come to regard email and meetings as time wasting. Slack buys into this trope with the line “and no more email” to indicate an understanding of how workers have come to hate email. Slack offers some numbers in support of its claim to offer a “simpler, more pleasant and more productive” work experience. The company claims that Slack usage leads to a 48.6% reduction in email on average. Despite Slack’s claim, I note with irony that its sign-up and verification processes are based on email. Although makers of collaboration software products attempt to sell it as a better alternative to email, it seemed unlikely that email would simply vanish and give way to these new products. As evidence increased productivity levels, makers of collaboration software products often cite a decrease in email, which leads to a circular argument. Even if enterprise software companies had some trouble quantifying the value of their product, as is
so desired in the business community, there was a remarkable amount of interest in the various collaboration products as evidenced by Slack’s billion-dollar market valuation.

Workers started to form preferences. Some used Workplace by Facebook to keep up with work events but found Slack to be a much better tool for communicating with colleagues on projects. It was not uncommon for some organizations to use multiple collaboration software simultaneously or move from one to the other but email remained a constant presence. In recognition of email’s staying power, on September 24, 2018, Slack announced that it acquired Astro, an email client, to transition email into Slack channels.

Notwithstanding the distinctions makers of collaboration products tried to draw between their tools and email, the similarities remained obvious. Both products not only allowed workers to access work anytime and from anywhere but allowed work to be their constant companion regardless of their preferences. Work was no longer constrained by the boundaries of place unless the relevant worker was quite determined, a position which often involved the use of multiple devices and came at great risk in organizations that favored a culture of constant availability.

Also, while email tended towards formality, communication in collaboration tools often read like informal social interactions with a lot of spontaneity and playfulness. Synchronicity is also a distinguishing feature, although the unavailability of a worker on a collaboration platform, alongside immediate responses via email muddies the distinction. Email and collaboration products have differing use cultures as well. Often, a user’s status was displayed within the platform and a refusal to respond within minutes could be interpreted as rude. If communication is a primary component of work in the 21st century then each worker’s work pace was not only rendered hyper visible but was being recorded and archived.
Slack and work boundaries

Slack it would seem, offered a unique twist to the chat function, thereby unveiling the potential for a huge market in enterprise chat. Apart from its undoubtedly useful features, its unorthodox name and its deliberate existence at the fuzzy spatial and temporal boundaries of work and non-work renders it a technological reflection and mediator of the tendency to simultaneously engage in work and non-work. The CEO, Stewart Butterfield, highlighted the playful inspiration for the software, when he responded to a question about the software’s origin on Twitter. He posted an exchange about the name of the company.

9:48 AM <stewart> I was up very late last night thinking about things
9:49 AM <stewart> and it is no exaggeration to say “WOW!”
9:49 AM <stewart> Also, I have a better code name
9:49 AM <stewart> “Slack” and/or “Slack App”
9:49 AM <stewart> Searchable Log of All Conversation and Knowledge
9:49 AM <stewart> but “slack” is also just nice to say
9:51 AM <eric> I like it, but… it has kind of negative connotations, too.
9:51 AM <eric> Our users would be Slackers :)
9:52 AM <stewart> ta da!
9:52 AM <stewart> just a codename
9:52 AM <eric> ah, cool
9:53 AM <stewart> but wait till I have Kuke draw you the “slack” (8 armed, fuzzy-headed

November 14, 2012, Twitter, https://twitter.com/stewart
Slack was born from the above exchange and now contributes to the hypermediation that Sharma (2014) recognizes in her work on the micropolitics of temporal coordination among workers. As a medium, it is implicated in the power disparities between capital and labor, providing features for both sides to enact their strategies and tactics for control and resistance. These attempts at control through communication are somewhat reminiscent of late 19th and 20th century approaches by companies like Illinois Central Railroad, Scovill Manufacturing Company and E.I. Du Pont De Nemours & Company (Yates, 1993). At these companies, management made attempts to transcend the individual such that critical information about performing various tasks in the company were recorded and archived for easy reference (Yates, 1993). In comparison, Slack, complete with knowledge archival and retrieval features, is an advanced version of the 20th century information management and communication systems.

Unlike archaic memos, Slack operates in the realm of new media, and subtly contributes to modifying the relationship between capital and labor from one of coercion to collusion in the perpetuation of a 24/7 environment. As Crary (2013) observes, “a 24/7 environment has the semblance of a social world but is actually a non-social model of machinic performance and a suspension of living that does not disclose the human cost required to sustain its effectiveness.” Mazmanian, Yates & Orlikowski (2006) empirically study the process through which a specific new media technology, the blackberry, results in the creation and maintenance of a 24/7 environment of work.

Beyond showing this link, the study underscores workers’ varied subjectivity in the experience of space and time. For instance, the sales representatives who were the client facing workers with apparent evidence of their contributions to the company’s revenue were less inclined to use their blackberries 24/7, while the company lawyers who for career
identity reasons, felt that they had something to prove, allowed blackberry messages to interrupt their family events. A similar subjectivity in experience can be inferred when Gregg (2011) offers the precarity of non-tenured academic employment as a contributing factor to presence bleed.

These subjectivities in spatial and temporal experiences of labor as mediated by technology are somewhat traceable to industrial trends of control (Beniger 2009). It was soon recognized that informal work norms, like rebukes from peers for exceeding or falling below normative production quotas, could override Taylorist control systems. In response, the authoritarian system of control morphed into what Beniger describes as manipulative human relations.

The human relations system was built on the understanding that social expectations and personal feelings were more important than working conditions (Skinner, 1984). Hence, the idea emerged that productivity could be enhancing by appealing to workers’ feelings and it would appear that in current times, software applications could be used to influence workers’ feelings in this manner. In fact, Vibe, a third party application on Slack promises to “show how employees feel in real time and what causes their mood to change.” Like boundary challenges associated with space, time and data, it is difficult to separate work-related emotions from emotions triggered by non-work matters, resulting in affective spillages from non-work spheres into work and vice-versa.

In an attempt to situate work in the ordinary flow of social interaction, applications like Slack attempt to reshape work communication using a chat model akin to what is found in the leisure space. Chat is considered superior to other communication channels because “it can be both immediate and synchronous or asynchronous like email.” (Mims 2016). Its capacity for synchronous exchange makes it similar to instant messaging applications.
available as an add-on to email accounts like Yahoo and Gmail, social media accounts like Facebook and as standalone applications like WhatsApp and Snapchat.

Chat functionalities in their encouragement of synchronous exchange afford both congruity and dissonance between physical position and cognitive location of workers. While the contrast between position and location was employed in the analysis of art (Griswold, Mangione & McDonnell 2013), this study employs the contrast in respect of chat applications. Position therefore retains its meaning as “the characteristics of and relationship among material actants” while location refers to “the schemas and conventions that are triggered by the position of objects, words, and bodies” (Griswold et al 2013).

Consider an individual with a chat application. When a message is pushed through the app, the device housing the app issues an alert, drawing the attention of the individual. The placement of the application on a proximate device invites engagement. Since its features are arranged to encourage instant messaging, the individual cognitively moves into the sphere to which the alert corresponds, work or non-work. Depending on the physical location of the body and the housing device of the app, physical proximity and cognitive location may not be in sync.

As a qualifier, the incongruity in communicating serious work issues via using informal styles does not necessarily translate into dissonance because certain forms of work are deliberately designed to mimic non-work relations and not only in communication. Silicon Valley companies are known to create non-traditional workspaces, complete with Ping-Pong tables, foosball, slides, bars and other objects and spatial arrangements that belong in non-work spheres. Such work models found among large digital media companies like Google and other technology start-ups, are being copied by more traditional work places where the culture is not casual and attempts to make it appear so are conspicuously top-down.
Rather than define Slack as a tool exclusively designed to promote top-down control of labor, I suggest that there are nuances in Slack’s mediation of the labor relationship, which can be identified by analyzing its digital materiality and exploring possibilities for worker resistance and protection. Within the structural constraints of the application’s functionalities and design, the potential for user action stands out and I explore the norms of usage that have evolved in Data-io, an organization that uses Slack. Like other platform studies that delve deeply into the working of the technology in focus (Jones, S. E., & Thiruvathukal, G. K. 2012 and Salter, A., & Murray, J. 2014), I engage extensively with the features of Slack itself.

**Slack Adoption in Data-io and Alpha-lytics**

Data-io, a data analytics company located in the Northeast area of the United States, is the result of a spin-off from another start-up, Alpha-lytics. It comprises 25 people, mostly engineers, a few product managers and some administrative personnel. Data-io’s use of Slack is attributable to its history as a part of Alpha-lytics. At Alpha-lytics, a few workers took a liking to Slack, installed it and used it to communicate among themselves. Within two months, most workers at Alpha-lytics were on Slack and it became the unofficial communication platform. The company management at Alpha-lytics formalized the usage and Slack messaging became the primary mode of communication, drastically reducing the number of emails between members. When Data-io was spun off, it continued to use Slack as its primary mode of communication.

Marvin, a director at Data-io, had been with the company prior to its spin-off from Alpha-lytics. He had also worked with a large investment bank in the Northeast and a small financial services firm in the same area. Consequently, in his account, he contrasted the
specific usage of Slack in Data-io with the communication culture at his previous jobs, specifying that a start-up was a better fit for Slack adoption.

Marvin offered a critical perspective on Slack usage despite his apparent preference for the product. During interviews, he offered glimpses of his Slack account, providing a narrative of the product’s impact on the flow and pacing of his work. As an expert user of the product, he had mastered the various settings, including how to mute various conversations to minimize alerts and maximize his focus time.

**From Bottom-up Adoption to Official Channel**

Slack was introduced to Alpha-lytics through a bottom-up process. Marvin and some other workers at the company heard about Slack and decided to engage in conversations over the platform. As more workers at Alpha-lytics joined the Slack team, it became the unofficial channel for communication. Within a few months, Alpha-lytics officially adopted Slack, moving from a free plan to a paid subscription and even making company announcements through Slack. It resulted in a huge reduction in email with Marvin suggesting that he paid little attention to his inbox because it was mostly spam. He noted that there was some resistance when Slack became an official channel. An engineer on the team considered the app more of a nuisance than an advantageous communication tool and would check his notifications only once daily.

Formal adoption also led to reduced Slack activity even among the pioneers. The promise of certain degrees of autonomy and exclusion of management control in the initial informal use of Slack was lost when Alpha-lytics co-opted the communication platform, reinforcing its power to determine the system of communication within the company. The
cool-off that pioneer users in Alpha-lytics experienced may be attributable to their recognition of the overarching control structures in place at Alpha-lytics.

**Channel Selection**

Another reason for reduced use was fatigue from an exponential increase in Slack channels after formal adoption. Marvin compared Slack to email, largely because he regarded the former as an improved alternative to the latter. The compartmentalization offered by Slack channels redistributes the control in typical email communication although not irreversibly. A user is generally free to select channels of interest and ignore others. Marvin for instance set up his account to receive notifications from specific channels and those that specifically mentioned his name. This meant that a sender did not possess sole discretion to choose message recipients. Rather, users could decide what kind of messages and updates they got. Of course, a user could simply send messages to everyone on the team or send a direct message to a specific user but channels were the major loci for communication.

Channel selection options present some level of control, which may be illusory in some cases. For instance, it seemed unlikely that users could reasonably refuse to subscribe to channels addressing projects for which they were primarily responsible. Besides, the features and design of the app are subject to the overall framework of control, which can be exercised to realize a specific set of behaviors within the app.

**Archival Properties and Transparency**

Slack’s archival properties render it quite like knowledge archives in the companies described by Yates (1993) and a vital component of organizational memory. But the product was better appreciated for its message functions than its search and archival functions, according to the
respondents that reported the use of Slack. However, the company’s aspirations to be a corporate archive for the retrieval of knowledge generated through communication remains vital to its product narrative.

The gap between the vision for the product and user experience is also replicated in transparency. Slack suggests that its product allows for a more transparent workplace but conversations with Marvin and the design of the product indicate otherwise. The narrative of transparency runs counter to the confidentiality measures the software has in place. Keyword searches may not return results in channels to which the requestor has no access thereby limiting transparency to the decisions of the channel creators as opposed to the app. These settings underscore the role of agency in technology design and adoption effects.

**Blurring Boundaries of Work and Non-work**

Slack boasts compatibility with a range of devices including desktops, tablets and smartphones. This ability to receive alerts and engage in work regardless of the device contributes to the integration of work and non-work. On this subject, Marvin stated: “Slack makes it easier for me to communicate with people outside of normal working hours. It is more fun, and gamifies communication. It is almost like a friendly conversation you’d have with your friends in the evening.” His account shows how the architecture of Slack feeds into the potential for a blur between work and non-work times and spaces, encouraging a 24/7 environment. He states, “Slack can make the problem of respecting boundaries worse but I don’t think it is Slack’s fault but it has the power to define what communication should look like. Zeroing in on the “away” feature, which ordinarily prevents other users from pushing messages through to the activating user, he recommended that it should be opt out, such that no action was required unless a user wanted to receive messages outside of the
programmed work hours. Slack also recognizes and indulges the tendency to engage in personal activities during traditional work hours. It acknowledges this behavior in the tour video, describing non-work distractions as “research” and promising to push Slack notifications through to whatever window or application a user is located.

Slack’s role as a platform for a universe of enterprise applications expands the influence of the products on work boundaries. An example is Vibe, a sentiment analysis application on the Slack platform that claims to read the emotions of workers in Slack channels thereby providing invaluable data to the employer on worker engagement. While the application may be overselling its capabilities (it does not analyze private channels & direct messages where emotions are more likely to be expressed), the core functionality expands work boundaries to include workers’ emotions.

**Norms of Use, Self-Policing and Peer Policing**

The channel-based configuration of Slack allows users to create dedicated virtual spaces for funny messages or cat videos. Marvin indicates that Data-io had such a channel, “random,” dedicated to what he described as funny “meta comments” about work. “I don’t post in there”, he said and “I don’t get notifications from random unless someone mentions me” He explained further that the channel used to be one of the more active channels but got quieter with the spin off from Alpha-lytics.

Besides the general restriction of funny posts to ‘random,” Data-io also had norms of use about message timing. For instance, it was not typical to post messages at 2am unless it was within engineering channels where the work culture made such behavior was acceptable. Marvin indicated that he belonged to one such channel primarily comprising code writers who tended to work through the night and post comments about their progress and
difficulties. In other channels, such behavior was considered disrespectful because it could wake or keep people up.

Hierarchy also qualifies the timing of posts. As a result, activating an “away” status, which typically prevented the receipt of messages was not useful in hierarchical communications. Marvin stated: “My direct manager at Alpha-lytics would Slack message me at odd hours and expect a response. I don’t so that. Just because I send a message to people doesn’t mean I expect them to respond.” It is helpful to note that his direct manager at Alpha-lytics was also the founder of the company.

Due to the norms of use in the team, channel or company, Slack users often engaged in some level of self-policing to ensure compliance and protect their reputation among colleagues. Marvin indicated that using the @channel pushed message notifications to all members of the channel and was likely to be an annoyance if the message was frivolous or better directed to a narrow audience. This capacity for users to ignore the neat divisions of channels suggests that Slack may itself be as prone to frequent and irrelevant interruptions as email. In sum, effects of Slack use are highly dependent on users’ creation and adherence to norms of use.

**Design and Delightful Experiences**

“There are so many fun consumer products out there like Instagram and Snapchat … [A] higher bar has been set for figuring out how to deliver those same experiences and feelings from business tools.”

Christina Janzer, Slack Director of Research

Slack’s research director highlights an important influence on enterprise applications—non-enterprise applications or social media. Facebook has over 2 billion monthly active users and
is parent company to WhatsApp and Instagram with over 1 billion monthly active users each. In 2017, the average daily use of social media worldwide was 135 minutes a day (Statista). Scholars have written extensively about the social, mental and political downsides of such pervasive social media use (Vaidhyanathan 2018, Turkle 2011). However, fields like user experience continue to thrive, showing a business demand for design that ensures user engagement.

But user engagement is purposive. The business model of social media products and platforms monetizes user engagement, which manifests through attention, content creation and interaction with content and ads. Social media platforms, at a most basic level, offer connection. In the process, users generate data that is repurposed for targeted advertising. Social media platforms benefit from network effects such that the more subscribers they secured, the more subscribers they are likely to secure.

Slack’s research director draws a distinction between social media products and enterprise products. She argues that while enterprise applications should mimic these products in delivering “delightful experiences,” the definition of a delightful experience is contextual. According to her, a delightful experience in the social product context may translate into using the product all day but in enterprise, the same experience should save time on tasks leading to less overall use.

The argument assumes that the work of a knowledge worker consists of discrete, planned tasks and further that the completion of those discrete tasks signifies the end of a work period or the workday. This tidy vision of work is removed from the reality of the modern knowledge worker, whose daily work activities are a mix of planned tasks and spontaneous duties sprung by coworkers. The ability to complete work tasks faster does not necessarily lead to a reduction in the workday.
The assumption that speedier completion of work leads to less work time is premised on a task-based understanding of work where projects for the workday are completed in an uninterrupted sequence. It also assumes a bright line demarcation between work and non-work, which this study proposes is imaginary and sometimes aspirational but never quite the reality, especially for knowledge workers. More importantly, the “work hard and go home” line combined with the assertion that delightful experiences of work on enterprise tools might cut down work hours fail to acknowledge the practice of emotional labor in organizations alongside the need to engage in exaggerated rituals of productivity, which I covered in chapter 4.

To close the gap between Slack’s model of work and workers’ experiences, writers at the company post web articles labeled “Office Hours: Get better at Slack.” The articles range from recommendations about how to manage communication in workspaces to advice on managing communication during vacations. The articles promote the idea of transparent and democratic workspaces but appear to acknowledge that users adopt opaque and hierarchical communication methods on Slack. The article, “What to post where in Slack” concludes with a note that the writer believes the “healthiest Slack Teams are those with the majority of their messages in public channels.” (Perhaps this is one of the reasons Symphony, built on information walls, developed its own niche in the market) However, the decision to conduct conversations in public channels is hardly up to an individual worker. Information walls, organizational culture and the settings put in place by the corporate customer are structural factors, more likely to shape the transparency of conversations in Slack. Notwithstanding, the company directs its best practices evangelism at users and posts articles about appropriate behavior in Slack workspaces. In these articles, the company’s desire not just to
sell a collaboration product but also to spread its own vision of digital work, comes across clearly.

Social Responsibility and Enterprise Software

The catalyst role that enterprise software plays in the blurring boundaries of work and the consequent effects on privacy, remuneration and personal time makes it important to question whether enterprise software companies have a responsibility towards workers. From a legal perspective, contractual agreements govern the relationship between workers and enterprise software. However, such contracts show that enterprise software companies prioritize their relationship with employers over the interests of workers. Slack’s separate terms of service for users (workers) and customers (companies) highlight how enterprise software companies subordinate the interests of workers to their employers. The User Terms of Service addresses workers directly: “You are an authorized user on a workspace controlled by a customer.” By this declaration, Slack emphasizes its alignment with companies and its assumption of corporate control over work.

Enterprise software companies have an economic incentive to align with employers because companies pay for the software and profits are generated from paid subscriptions. Free plans that workers, acting on their own, are likely to select are not financially rewarding. The alignment also frees the company from the current debates on the ethical use of data. By defining all the workspace content as “customer data” (data owned and controlled by employers), Slack buys into a space-based logic of data ownership: employers own and control workspace data. As a result, Slack cedes control over user data to companies, thus avoiding potential moral liability for the data. Moreover, Slack avoids the responsibility for informing workers of the data and privacy consequences of workspace account settings,
imposing the duty on companies instead. In this way, despite creating software that impact the boundaries of work, enterprise companies like Slack attempt to situate themselves as neutral tools within the employer-worker relationship.

But according to Winner (1980), artifacts—and by extension here, software—have politics. And the politics of enterprise software, to the extent that they mirror Slack’s way of positioning itself in its terms of service, align with employers’ control over workers. The software has mobile versions, tethering workers to work. It can archive workplace conversations conducted in the digital environment, eliminating privacy from the digital workspace. It also connects to thousands of third party applications, for both work and non-work, thereby expanding the space, time and data employers control. Since workers (described by Slack as “users”), agree to Slack’s terms, vesting workspace control in their employers (described by Slack as “customers”), the arrangement is legally sound.

From a perspective of social responsibility, enterprise software companies can hardly claim ignorance of the surveillance capacities of their software. Users can be informed of their workspace settings, nudged towards maintaining time boundaries through displays of logged hours and educated about the risks of using the software. However, enterprise software companies have no incentive to engage in literacy efforts. In fact, the general perception of corporate governance law suggests that the primary purpose of a corporation is profit making for shareholders. *Dodge v. Ford* often cited on the topic states:

> A business corporation is organized and carried on primarily for the profit of the stockholders. The powers of the directors are to be employed for that end. The discretion of directors is to be exercised in the choice of means to attain that end, and does not extend to a change in the end itself, to
the reduction of profits, or to the non-distribution of profits among stockholders in order to devote them to other purposes.

Notwithstanding this statement, Ford who was looking to expand the company’s manufacturing capacity and reduce car prices, secured qualified permission to pursue those plans. But the American Law Institute Principles of Corporate Governance still specifies that profit maximization is the primary corporate goal, lending credence to the Dodge v. Ford quote. However, the Principles, unlike the case, outline some exceptions to the rule of profit maximization: complying with law, donating to charity and “applying reasonable amount of resources to public welfare, humanitarian, educational and philanthropic purposes.”

While worker protections (like logged time displays and workspace settings) can be classified as public welfare, such moves may result in a threat to profits as paying customers of enterprise software companies can interpret the notices as inciting workers to rebel against corporate control. So Slack adopts a perspective of work boundaries that boosts its profits and offers to make the company-controlled digital environment fun for workers.

Conclusion

The chapter expounds on the ways technologists view work boundaries, how their views are reflected in software design, and how enterprise software features exacerbate the propensity to blur temporal and spatial boundaries of work. Techno-centric solutions for creating positive experiences of work, as shown in this chapter are decades old, their fervor intermittently revived by recycled efforts to sell efficiency, productivity and less drudgery at work. With the growth of cloud infrastructure, development and adoption of enterprise software have grown, ensuring that the benefits of mobility are no longer restricted to large
corporations. Small companies can transcend the restrictions of space, hire workers in far-flung areas and virtually situate them in placeless, software-generated digital environments of work.

Utopian visions of work offered by technologists do not necessarily mirror worker experience with enterprise software. Promises of fun and delight obscure the role of these software in the blurring boundaries of work, at the cost of workers’ personal time and data. Although enterprise collaboration software make claims of enhanced productivity (which Slack describes as completing work more quickly) over email, it is unclear that any features exclusive to Slack promote temporal or data boundary management. The synchronicity of Slack alongside its connection to numerous third party applications make it a bigger threat than email to temporal boundaries of work. Email simply is an important technology in organizational communication caught on the wrong side of the current productivity and collaboration movement.

This chapter also explores the push and pull of power between companies and their workers. The account of adoption at Data-io suggests that the excitement of using Slack may not be attributable to the software features but may derive from choice, autonomy and freedom from corporate monitoring, which workers lost once management officially adopted the software. The eventual official adoption of Slack can be considered as management’s reclamation of control over digital spaces of work, ensuring that workspaces are properly within management’s line of sight and control. This outcome aligns with Slack’s profit-maximizing goal.

As part of the account of the political economy of the workstream collaboration market, this chapter examines Slack’s unlikely success in the face of challenge from two of media and technology’s biggest oligarchs, Facebook and Microsoft. But it also draws attention to
Slack’s growing power as a product for enterprise communication and as a platform for other enterprise applications. As a self-described collaboration hub, it functions as a gatekeeper for thousands of enterprise applications, seeking access to enterprise users through Slack. It operates under a principle of openness, which has allowed the installation of over 3 million applications on the platform. Despite this success and a current valuation of over $7 billion, Slack is still much smaller than its major competitors, raising the question whether the workstream collaboration market might begin to reflect the oligarchy of the larger technology market. Arguably, it might, regardless of the outcome with startups like Slack, given the tendency towards consolidation. For instance, Slack acquired Atlassian’s HipChat and Stride, two enterprise collaboration products. Slack then migrated HipChat and Stride users to Slack. In the same year, 2018, Slack also acquired Astro, to move emails into the Slack environment, advancing its email replacement agenda. As the workstream collaboration market continues to grow and mirror the larger media industry, the need to adapt labor related laws to digital environments, for worker protection, will grow more critical, particularly because given the choice between alignment with workers or employers, enterprise software companies have an incentive to side with the latter.

Despite the dire outlook for worker-oriented work boundaries, there are possibilities for better worker protection. As the concluding chapter will show, developments in the consumer space offer some hope. Public discourse about the downside of digital technologies led the technology industry to shore up consumer privacy and offer tools for managing excessive use of digital media. Similarly, concerns about manipulation of democratic processes have compelled social media companies to re-evaluate their operations. With widespread conversations about space, time and data boundaries of work, protections for the digital worker may begin to evolve.
Chapter 7

Conclusion

This study’s focus on the continuities of work and non-work has situated knowledge workers in company-controlled software environments where informed boundary regulations are absent. Knowledge workers thus carry the risks associated with comingling space, time and data along work and non-work boundaries, with far-reaching psychological, financial and physical pressures. The unmitigated risks associated with persistent integration of work and non-work creates a dysfunctional society that prioritizes corporate interests over the welfare of working humans. This concluding chapter reviews the current predicament of the digital worker and explores the possibilities for creating space, time and data boundaries that accommodate the need for productivity without threatening health, privacy and personal time. In particular, it positions this study as a contribution to the much-needed discourse about the boundaries of digital work and recommends the use of the smart regulation framework in re-conceptualizing the boundaries of digital work.

Prior studies of work, were situated in non-digital contexts, adopted organizational perspectives or failed to account for the legal frameworks or business interests underlying the structure of work. Cowie (1999), whose account of work was situated in a pre-digital context, indicated that the transcendence of spatial boundaries was a prerogative of companies, which in response to worker protests often relocated factories to secure more tractable talent. Worker control, in Cowie’s account, was thus limited to bounded physical workplaces. Other historians of the 20th century workplace related similar place-bound descriptions of worker control. For instance, Biggs (1996) showed that foremen watched
factory workers and oversaw technologies like the conveyor belt to maintain a predetermined work pace. From a sociological perspective, Hochschild (1990, 1997), examined work’s expansion beyond place boundaries but was largely focused on a media-agnostic expansion of the workplace and consequent compression of the traditional home. While some studies have examined the fluid boundaries of work in the digital context, they have tended towards organizational perspectives and discussions of hardware (Mazmanian, Orlikowski and Yates 2013). On the other hand, feminist scholar, Gregg (2011), took a decidedly non-organizational perspective on the flow of work into non-work and argued that new media technologies exacerbate knowledge professionals’ tendency to engage in presence bleed—the performance of work outside of the physical boundaries of the workplace. However, the account omitted legal frameworks and business alliances that contribute to presence bleed.

In contrast, this study showed that workers may transcend space and time boundaries of work in exchange for expanded employer control. Rather than a place-based type of control embodied in foremen, it probed a subtler but no less impactful approach to corporate control over space, time and data, showing how surveillance is rendered so invisible in software, that some workers like Sharon seem oblivious to it. It also showed how the use of data collected about workers is so vaguely conveyed by corporate policies that workers are unclear about the implications of corporate monitoring. They know it affects perceptions of productivity but are unclear about the precise rules, leaving workers like Maria to depend on rumors and Dave to depend on his paranoia about corporate use of his personal data.

The ambiguity of corporate policies is a form of control. It renders the digital environment of work a form of panopticon where workers as subjects of surveillance are monitored but do not fully understand the mechanism and timing of surveillance.
Workers can then proceed with the assumption that their activities in the digital work environment are always watched and attempt to totally separate work and non-work or they can simply assume benign intent and continue with their preferred boundary management practices. However, workers cannot confirm that their perceptions of the extent of data collection, analysis and reliance for decision making align with actual corporate practice. As such, based on their levels of concern about boundaries, and risk tolerance, workers attempt (to the extent that it is possible) to reconcile their preferences with their assumptions about corporate collection and use of the data. And where even the most liberal interpretation of corporate policies fail to support workers’ preferred boundaries, like Dave, workers often cave to corporate control.

Unlike Hochschild’s studies juxtaposing work and family, this dissertation has provided a contemporary account of work boundaries along three interrelated dimensions—space, time and data, thus introducing readers to a media-oriented and more rounded view of work and non-work. In addition, instead of the focus on mobile devices, as drivers of integration, I focused on how the enterprise software industry drives the experience of work as a place and time agnostic work environment. And unlike Gregg (2011), I offered legal and business contexts for work boundary issues and proposed that work boundary concerns are not restricted to the flow of work into the non-work sphere but also include the flow of non-work into work, with important legal implications including worker privacy.

Through content analysis of corporate codes and interviews, this study found that employers encourage the blurring of work and non-work boundaries, provided the spaces, time and data implicated in such integration are subject to employer oversight. According to workers who must travel many miles and endure gridlocks to show up at specific physical workspaces, spatial boundaries are a nuisance. As a result, there is little aversion to the spatial
blur. Workers like Dave, who work under such spatial constraints, register their displeasure and some like Elena secure the option to work remotely albeit only a few times during the week. Other workers like Leo are so intolerant of spatial boundaries; they would resign rather than comply. In sum, workers in this study displayed a general aversion to maintaining strict spatial boundaries of work.

While blurring spatial boundaries of work has the potential to reduce travel time and reclaim workers’ personal time, it can exacerbate temporal and data blurs, which holds serious implications for remuneration privacy and health. The interviews with workers highlighted interconnectivity between spatial and temporal boundaries of work. As John revealed, he was open to working longer hours when working remotely. Similarly, Sharon would take on additional work because she could work remotely, and would conduct personal activities at work because she often worked late. Cody likewise indicated that he enjoyed working extra hours at home.

The interconnectivity of spatial, temporal and data boundaries is supported by digital technologies that serve as a medium for extending corporate control. These technologies, particularly enterprise software, operate under the logic of making work more pleasant for workers but end up contributing to expanding employer control over integrated work and non-work spheres. This alignment of enterprise software companies with employers is not coincidental. Since employers are the paying customers, it makes good business sense to prioritize them over workers—mere users.

Corporate alliances around work boundaries are not restricted to enterprise software companies and employers alone. Retailers and advertisers are also implicated in the exacerbation of the digital worker’s precarity. Focused on the need to make sales, retailers and advertisers exploit the fluid boundaries of work to deal with workers as consumers. As
studies reveal, consumers, like workers, are just as exploited for data. By transforming workspaces into shopping spaces, worker and consumer identities become fused, highlighting the connection between wages and consumerism, alongside the connection between corporations as employers and as sellers. In the former context, they care about worker productivity, while in the latter, they care about selling to organizations and consumers.

As drivers of productivity and consumerism, corporations are doubly interested in data. Data from worker engagement with enterprise software, retailers and advertisers informs consumer segmentation, ad targeting, worker productivity and fit analysis—how a worker fits into a team. In particular, data from individuals as consumers is ported into the workspace and visible to employers’ watchful gaze. Corporate interests, whether as employers, advertisers, retailers or enterprise software companies are therefore aligned against the privacy interests of the consumer/worker.

Despite the huge psychological and material risks that boundary blurring poses to knowledge workers, companies have no incentive to change because they benefit from the current state of affairs. Whether as employers, enterprise software companies or retailers, the current system serves business interests. It fails society however, given the human cost of the integrated digital environment.

The human cost of the current approach to integration includes personal time, wages and health. As discussed in preceding chapters, workers disclose spending more time at work because of spatial and temporal blurs. In relation to such practices of overwork, Crary (2013) observes that the “24/7” approach to work has implications for the human body. Maria’s experience of poor health due to constant work demonstrates those bodily risks of mismanaged work boundaries. Apart from loss of personal time and poor health, the century
long connection between time and wages means that workers integrating work and non-work time risk losing wages for additional hours worked. Arguably, non-work activities can compress work time but accounts of workers, alongside corporate surveillance efforts to ensure productivity, suggest otherwise.

Privacy is another one of the costs of integration examined in this study. There are some economic perspectives that fail to ascribe value to individual privacy, suggesting instead that only corporate data should be protected (Posner, 1978). Such views subordinate workers as individuals to companies and in the tension between surveillance and worker privacy, the former will be prioritized over the latter. But the value of worker privacy, like consumer privacy is preemptive. In an environment where algorithmic decision-making has become the norm, there is a need to draw boundaries around data that can be monitored or analyzed by employers and data that should be kept private from employers’ gaze. But integration makes data separation challenging and since employers have little incentive to steer clear of easily accessible worker data, the result is compromised privacy. I note that the confidentiality of corporate intellectual property is implicated here as well, but companies are generally able to secure corporate data with remote wiping options among other security management approaches that are unavailable to workers. That is, a company may remotely wipe workers’ devices under a BYOD or COPE arrangement but it is unlikely that workers can remotely wipe their personal data from corporate owned assets in the event of a perceived threat to privacy.

Despite the risk to workers, the incentive-driven nature of the digital environment makes employer-inspired changes unlikely. For employers, there is simply nothing to gain from ceding control over the rapidly expanding sphere of work. This self-interested behavior of labor actors organizes the entire digital workspace and drives the competing imaginaries of
work boundaries that inform corporate policies, worker behavior and third-party (retailers, advertisers and enterprise software companies) alliances. Employers are driven by the desire to increase productivity, protect corporate assets and monitor workers. Other corporate actors align with employers for profit maximization, while workers are motivated by socioeconomic considerations like wages, personal time, peer expectations and the desire for a sense of autonomy.

 Nonetheless, power inequities mean that workers are at the greatest risk. When advertisers and retailers decide to schedule sales and campaigns for work hours, they are encouraging workers to expose more data to employers’ watchful eyes. The incentives on either side are thus muddled. Although such behavior allows workers to assert control over their time, it doubles as a self-defeating tactic as well, putting both data and perceptions of productivity at risk. On the side of retailers and advertisers, there are productivity risks to their own workers as well. And based on reports of the work culture at companies like Amazon, there is little indication that retailers and advertisers will be tolerant of non-work activities like online shopping among their own workers, at least during work hours.

 Situating the narrative of work boundaries within a framework of incentive-driven behavior highlights the need for legal intervention. Provided there are no incentives to protect workers from excessive corporate control, the digital workspace will remain subject to the whims of individual employers. To clarify, some employers are less inclined than others to exploit workers’ vulnerability and such employers are likely to argue against regulatory intervention. But the inability to protect workers from the excesses of less restrained employers makes the need for legal guidance clear.

 In addition to legal guidance, public pressure is an alternative avenue for mitigating integration risks. By public pressure, I refer to the kinds of public discourse that have
recently been conducted around smartphone addiction. In response to the public outcry against the overuse of smartphones, companies like Google have introduced features for managing smartphone use in the consumer space. The VP of Product Management, Android and Google Play, described the app timers on Android 9 pie as “balance” features, for which there is now a demand (Samat, 2018). Similarly, Apple offers a weekly report on screen time.

Paradoxical as it might seem that the fix for digital addiction driven by the attention economy is another capitalist offering, the restriction of balance products to the consumer space highlights an overly narrow focus on consumption to the exclusion of work. This study’s treatment of boundaries between work and non-work encourages the conception of workers and consumers as similar actors, whose identities and interests are often fused in work and non-work realms of corporate control, particularly the digital realm of software applications. As such, nudged by public pressure, enterprise software applications, like consumer offerings, can make logged hours visible within digital environments of work. Some employers can go further to impose technical constraints on the number of logged hours within the digital environment. In this way, enterprise software environments replace physical workspaces as the sites of work, transforming the logic of spatial boundaries from the physical to the digital.

Ensuring that the shift to digital work environments does not jeopardize worker privacy requires the adoption of frameworks that hold the value of privacy constant in changing environments. The theoretical frameworks proposed by Nissenbaum (2010) and Cohen (2012) are particularly useful for thinking about ways to preserve privacy in integrated digital environments. Nissenbaum (2010) offers a framework of contextual integrity that can help to situate reasonable expectations of privacy within the everyday practices of workers in digital environments. The framework aims to identify the social determinants of reactions to
systems and practices by deploying a three-step approach: explanation, evaluation, and prescription. The explanation aspect comprises the governing context, the roles of actors, changes in transmitted information, and possible violations of existing transmission practices; the evaluation aspect considers the stakes for contextual values; and the prescription aspect involves advocacy for redesign (Nissenbaum, 2010).

By describing the digital environment of work in preceding chapters, this study has laid out the context for rethinking workplace privacy issues. Nippert-Eng (1996) painstakingly outlines everyday practices of work in physical environments, using boundary management frames. She presents these practices on a continuum of integration and segmentation, and while the most recent technology she considers in her analysis is the telephone, the practices are easily adaptable to software. In fact, software applications on computers make the integration of work and non-work easier and more intuitive than she describes. For instance, she describes the receipt of cross-realm telephone calls—non-work calls at work—as an integration practice. This behavior is easily replicated by texting while at work, responding to personal e-mails, and online shopping. As company policies and courts have observed, there is a high risk of losing legally recognized expectations of privacy when workers make personal use of company equipment. As explained in this study, it results in greater surveillance, thereby extending the panoptic gaze of companies over workers.

To preserve the norms of integration in digital environments without eliminating expectations of privacy, laws and corporate policies ought to consider the architecture of new media technologies to promote what Cohen (2012, p. 239) describes as “semantic discontinuity”—a model that would consider the complexities inherent in preserving worker privacy despite the occurrence of work and non-work on the same devices. Getting to the prescriptive stage requires an acknowledgment of the limitations associated with the current
approach to worker privacy. Merely including notices of privacy risks in corporate policy documents does not eliminate the value in worker privacy. These policy documents are comparable to consumer privacy policies that merely include notices about data use. And if consumers feel helpless in the face of corporate exploitation of data, workers, who are reliant on employers for wages, experience even greater resignation to the surveillance system.

One possible approach is the imposition of technical standards through statute. Alternatively, more conversations about the privacy risks of integrating work and non-work may lead enterprise software companies to offer balance products in digital workspaces as well. In either case, a regulation or product feature may require companies to sandbox certain applications, for personal or work use.

A sandbox isolates specific programs from the underlying operating system, thereby preventing unauthorized access to files. In the case of company owned personal enabled (COPE), it can isolate personal applications to preserve the privacy of data in those applications without compromising companies’ need to access, review, and secure the information outside of the sandbox. In the case of bring your own device (BYOD), the sandbox can isolate enterprise applications from the other contents of the device. Implementing a sandbox approach simulates the non-digital space and combines the preservation of employee privacy in a highly integrated environment with respect for the protection of corporate assets. A sandbox is merely an example of architectures that are flexible enough to carve out room for cultural norms of integration without abandoning privacy expectations. Such architectures reduce the privacy risks of engaging in the common practice of integrating work and non-work. They acknowledge the practice of work and non-
work integration, while signaling that worker privacy is a value consistently protected across physical and digital work realms.

In addition to technical design, regulations need to be adapted to the current realities of integration. The primary problem with regulation in this area is the conception of work as a distinct activity in time and space. As a result, workers bear the risk of harm arising from conducting personal activities within the spatial or temporal boundaries of work. Given corporate tolerance for integration as expressed in corporate codes, alongside reported behaviors of workers, this study proposes that workers ought not to bear the risk of harm arising from integration. Rather, labor regulation and workplace privacy laws ought to redefine work boundaries to accommodate current digital cultures of work. For instance, the elimination of a reasonable expectation of privacy in personal activities conducted on BYOD or COPE devices runs contrary to the culture of integration.

In the absence of arrangements for protecting worker data in an environment that clearly encourages integration, regulators and society in general ought to push back against overbroad surveillance and data collection. Workers ought to enjoy privacy protections such as those included in the Code of Fair Information Practices—transparency, choice, accountability, information protection and information review. As the analysis of corporate codes reveal, employers are quite clear about monitoring workers. However, corporate codes fail to clarify whether the data collected on workers is stored and the duration of storage. In addition, workers are not offered a right of access to review the data collected so the scope of information within the control of employers and whether they engage in best practices for data handling remains unknown. If such omissions are intolerable in the consumer sphere, they should be disallowed in the work environment as well, thus solving the problem of information asymmetry on data collection and use in the workplace.
An unlikely solution is the re-segregation of work and non-work. Competing perspectives on work boundaries related in this study show how technologists, companies and workers are resigned to the integration of work and non-work in some dimension, whether spatial or temporal. As a result, the idea of imposing artificial demarcations on work and non-work to create contextual compatibility with pre-digital labor and workplace privacy laws is hardly feasible. Countries like France have tried though, by introducing the right to disconnect from work communications after office hours. Germany’s labor ministry instituted similar rules banning managers from contacting employees after office hours except in emergencies. New York City Council may soon pass a similar law. A bill introduced in March 2018 aims to make it unlawful for private employers in the city to require employees to check and respond to electronic communications after work hours.

These rules, however well intentioned, can be interpreted as excessive government intervention in what is considered private work culture among colleagues. Herein lies the weakness of these rules, the reliance on workers to assert disconnection rights and report noncompliance. For workers that feel compelled to stay connected to work because of a prevailing culture, seeking the protection of such laws may lead to alienation from the work team.

Instead of merely adapting the environment of work to the pre-digital imaginaries underlying current regulations, the laws can be updated to account for integration trends. Employers can be required to disclose non-work data collected on workers and justify collection, use and storage. Such rules will reduce the risk to worker privacy because the cost of compliance with data disclosure and justification may outweigh any information benefits to employers. In essence, the burden can be transferred to employers to show that integration does not result in excessive work or unreasonable data collection. Such
requirements will compel employers to weigh the cost of reporting pervasive integration against dissuading workers from excessively blurred boundaries.

Also, where employers encourage the integration of work and non-work, the evidentiary weight attached to notices and contracts eliminating reasonable expectations of privacy and demanding unbounded work hours ought to reflect workers’ vulnerability. This study does not challenge the validity of contracts eliminating expectations of privacy, accepting monitoring as part of employment or demanding fluid work hours but it invites a re-examination of the assumptions that underlie the acceptance of these contracts between employers and workers. It explains why such contractual terms are hardly deal-breakers for workers and argues that instead of dismissing workplace surveillance as an acceptable byproduct of work, the level of monitoring possible in digital workspaces ought to be an invitation to reconsider power inequities between employers and workers.

While the law catches up to the media-based integration of work and non-work, technical architecture can perform an interim regulatory role. Examples of logged time displays, app management software and sandboxes indicate that despite the blurred boundaries of work, the value of personal time and data privacy can be preserved through technical means. Moreover, the demand and consequent supply of “balance” products in the consumer space indicates that societal pressure on technology companies can connect the corporate profit maximization drive with a duty towards consumer welfare. With the right legal and business incentives, enterprise software companies can create similar features that help workers manage work boundaries.

But solving the current work boundary issues depends on technology companies and government recognizing the need for change and acting on it. Historical evidence indicates that developments in the protection of labor rights related to working hours and wages were
typically achieved through organizing. Unions have remained at the forefront of the protection of worker welfare but in the digital age, many workers are increasingly excluded from the benefits of formal unions and left to negotiate their working conditions, including boundaries, individually.

As worker accounts in this dissertation reveal, some workers are able to leverage their advanced negotiation skills to secure preferred work hours. Others, due to deficiencies in negotiation skills and other conditions beyond their control are subjected to undesirable conditions. These disparities in the capacity to negotiate preferred conditions of digital work contrast with the objective of unions to achieve largely uniform working conditions for similar classes of member workers.

Although formal strikes may be unavailable as negotiation tools among knowledge workers, they can nonetheless adopt the principles of collective action underlying union negotiation tactics. And as news from the technology community indicate, workers have begun to do so. In 2018, employees of Microsoft, Salesforce and Google protested against what they considered to be unethical practices by their employers. The protests met with varying results. While Google decided against renewing a Pentagon contract for AI technology used to interpret drone data, the CEO of Salesforce notably backed out of a Refugee and Immigrant Center for Education and Legal Services (RAICES) interview with the excuse: “I am sorry I’m actually scuba diving right now” (Levin, 2018).

Mixed results notwithstanding, workers in the digital age are exploring and using non-union ways of organizing about work issues. Groups like the Tech Workers Coalition and Coworker.org are helping to educate workers about labor history while creating a platform for workers to speak out about their working conditions. Although popular issues in non-union organizing have focused on immigration, warfare and sexual harassment policies, such
non-union forms of collective action can also be deployed to address work boundary issues, moving individualized forms of negotiation to a more powerful group level.

Instead of minimum and maximum work hours that characterized union demands of the industrial age, more flexible language would have to be employed to cater to the varying preferences of members of organizing collectives. Ultimately, the goal of organizing around work boundaries would be to promote transparency in data boundaries and eliminate the expectation of round-the-clock availability. It would focus on defining work boundaries in ways that conceive of workers not just as actors in the digital work environment but also as consumers and political actors.

While this dissertation hints at the idea of the multidimensional worker and focuses on the interplay between worker and consumer identities, it raises questions than it answers about collective action and workers’ political identities. Future research can explore how collective action evolves in the absence of unions and focus on non-union groups like Tech Workers Coalition and Coworker.org as case studies of platforms for non-union organizing. Interviews with the organizers and members of these groups will provide useful information about the inner workings of this type of organizing alongside worker perspectives on the fusion of their ideological and work lives. This integration of labor and politics is particularly relevant for its departure from the types of social movements studied in the field of communication.

In closing, this dissertation has discussed how enterprise software has come to occupy a key role in managing the space, time and data boundaries of the digital work environment; and argued that the current media-based approach to work requires a different regulatory framework from the time-based approach on which current labor laws are based. Although focused on knowledge workers, parts of this study are relevant to blue-collar workers as well.
In fact, a central point in this dissertation is that the time-based approach to work may suit blue-collar workers who are more likely to experience work as separate from nonwork. However, many blue-collar workers like waiters and cashiers must grapple with a different type of boundary problem—uncertain work schedules. Hyman (2018) argues that the inability of such workers to confirm their work schedules in advance is a form of precarity that is inseparable from a decades-long trend towards temp work. Similarly, blue-collar workers grapple with a different type of data boundary problem. When employers monitor blue-collar workers, the latter are under no illusion about the surveillance exercise. In fact, the visibility of the surveillance apparatus is part of the system of control. Whether blue-collar workers like truck drivers and warehouse workers can successfully push back against extensive monitoring is a separate question entirely and academic studies alongside investigative pieces are probing these topics (Levy, 2015)

For knowledge workers however, the dichotomy between work and nonwork is often artificial and the struggle to maintain genuine separation of spheres frequently ends in an embrace of the integration trend noted in the study of corporate policies. The resulting extension of surveillance is subtle. And that subtlety, which forestalls conversations about the attendant risks of integration, is a problem that this dissertation stresses. As more conversations about digital work boundaries arise, I expect that boundary management policies that deploy the regulatory capacities of various actors in the digital workspace to protect workers will evolve.
# Appendix

## List of Companies with Employee Handbooks (EHBs) in the Study:
Integration Tolerance; Privacy Expectation; Monitoring Notice; Use of Relevant Scenarios and Year of EHB

<table>
<thead>
<tr>
<th>Company</th>
<th>Integration Tolerance</th>
<th>Privacy Expectation</th>
<th>Monitoring Notice</th>
<th>Relevant Scenarios</th>
<th>EHB Year</th>
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