

THE RULE OF TECHNOLOGY: HOW TECHNOLOGY IS USED TO DISTURB BASIC LABOR LAW PROTECTIONS

by
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Much has been written on technology and the law. Leading scholars are occupied with the power dynamics between capital, technology, and the law, along with their implications for society and human rights. Alongside that, various labor law scholars focus on the implications of smart technology on employees' rights throughout the recruitment and employment periods and on workers' status and rights in the growing phenomenon of platform-based work. This Article aims to contribute to the current scholarship by zooming out and observing from a bird's-eye view how certain actors use technology to manipulate and challenge basic legal categories in labor today. This is done by referring to legal, sociological, and internet scholarship on the matter.

The main argument elaborated throughout this Article is that digital technology is used to blur and distort many of the basic labor law protections. Because of this, legal categories and rights in the labor field seem to be outdated and need to be adjusted to this new reality.

By providing four detailed examples, the Article unpacks how employers, giant high-tech companies, and society use various forms of technology to constantly disturb legal categories in the labor field regarding time, spheres, and relations. In this way, the Article demonstrates how social media sites, information communication technologies, and artificial intelligence are used to blur the traditional concepts of privacy, working time and place, the employment contract, and community. This increased blurriness and fragility in labor have created many new difficulties that require new ways of thinking about regulation. Therefore, the Article argues that both law and technology have to be modified

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to cope with the new challenges. Following this, the Article proposes three possible ways in which to start considering the regulation of labor in the digital reality: (1) embrace flexibility as part of the legal order and use it as an interpretive tool and not just as an obstacle; (2) broaden the current legal protection and add a procedural layer to the legal rights at stake; and (3) use technology as part of the solution to the dilemmas that technology itself has emphasized. By doing so, the Article seeks to enable more accurate thinking on law and regulation in the digital reality, particularly in the labor field, as well as in other fields and contexts.

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INTRODUCTION

Digital technology encompasses our lives. It provides the legal world with numerous new challenges due to its rapid development and extensive effects on society and the market.¹ As Shoshana Zuboff, one of the leading technology theorists, powerfully describes it, “The digital realm is overtaking and redefining everything familiar even before we have had a chance to ponder and decide.”² Among their various implications on society and the market, the digital reality, and particularly the emergence of the internet, have far-reaching implications for labor. Indeed, technology has always had meaningful implications for labor.³ And yet, as will be elaborated throughout this Article, the digital reality has unique effects on this field such that some scholars perceive it as a separate phase in the global history of labor,⁴ or even

¹ CHRISTIAN FUCHS, INTERNET AND SOCIETY: SOCIAL THEORY IN THE INFORMATION AGE 7 (2008); URSULA HUWS, LABOR IN THE GLOBAL DIGITAL ECONOMY: THE CYBERTARIAT COMES OF AGE 10–14 (2014).

² SHOSHANA ZUBOFF, THE AGE OF SURVEILLANCE CAPITALISM: THE FIGHT FOR A HUMAN FUTURE AT THE NEW FRONTIER OF POWER 4 (2019); *see also* MANUEL CASTELLS, THE RISE OF THE NETWORK SOCIETY 69–78 (2d ed. 2010); Jack M. Balkin, *How Rights Change: Freedom of Speech in the Digital Era*, 26 SYDNEY L. REV. 5, 6 (2004); Kenneth G. Dau-Schmidt, *Labor Law 2.0: The Impact of the New Information Technology on the Employment Relationship and the Relevance of the NLRA*, 64 EMORY L.J. 1583, 1603–08 (2015); Michael A. Geist, *Is There a There? Toward Greater Certainty for Internet Jurisdiction*, 16 BERKELEY TECH. L.J. 1345, 1353, 1356–57 (2001).

³ Kenneth G. Dau-Schmidt, *The Impact of Emerging Information Technologies on the Employment Relationship: New Gigs for Labor and Employment Law*, 2017 U. CHI. LEGAL F. 63, 63–64 (2017); Kenneth G. Dau-Schmidt, *Employment in the New Age of Trade and Technology: Implications for Labor and Employment Law*, 76 IND. L.J. 1, 1 (2001). *See generally* Robert D. Atkinson & John Wu, *False Alarmism: Technological Disruption and the U.S. Labor Market, 1850–2015*, INFO. TECH. & INNOVATION FOUND. (May 2017), http://www2.itif.org/2017-false-alarmism-technological-disruption.pdf?_ga=2.203972112.1815238732.1498722730-208437554.1498722730.

⁴ *See, e.g.*, KATHERINE V. W. STONE, FROM WIDGETS TO DIGITS: EMPLOYMENT REGULATION FOR THE CHANGING WORKPLACE 4–6 (2004) (offering a historical division of labor); *see also* KLAUS SCHWAB, THE FOURTH INDUSTRIAL REVOLUTION 11–13 (2016).

as a revolutionary point⁵ that is “more comprehensive and all-encompassing than anything we have ever seen.”⁶

It may seem, therefore, that digital technology has some sort of internal mythic power to lead society down an inevitable path; that technology by itself can turn and shuffle the familiar categories in everyday life, including in the labor context. This is, of course, not the case. As leading socio-legal scholars aim to demonstrate in their work, the far-reaching transformations we are witnessing today are not solely the result of technology; other forces in society—such as the market, politics, and the law—are leading society to reach certain ends instead of others.⁷ The growing body of literature describes the powerful role that tech giants have in shaping the economic structure of society⁸ and emphasizes the role of law in facilitating and

⁵ Pamela Meil & Vassil Kirov, POLICY IMPLICATIONS OF VIRTUAL WORK 3–4 (2017); Klaus Schwab & Richard Samans, *Preface* to WORLD ECON. FORUM, THE FUTURE OF JOBS: EMPLOYMENT, SKILLS AND WORKFORCE STRATEGY FOR THE FOURTH INDUSTRIAL REVOLUTION, at v–vi (Jan. 2016), http://www3.weforum.org/docs/WEF_Future_of_Jobs.pdf. See generally CHRIS FREEMAN & FRANCISCO LOUÇÁ, AS TIME GOES BY: FROM THE INDUSTRIAL REVOLUTIONS TO THE INFORMATION REVOLUTION (2001); CARLOTA PEREZ, TECHNOLOGICAL REVOLUTIONS AND FINANCIAL CAPITAL: THE DYNAMICS OF BUBBLES AND GOLDEN AGES (2003); SCHWAB, *supra* note 4.

⁶ Schwab & Samans, *supra* note 5, at v–vi; see also ZYGMUNT BAUMAN, LIQUID MODERNITY 147 (2000); Manuel Castells, *The Network Society: from Knowledge to Policy*, in THE NETWORK SOCIETY: FROM KNOWLEDGE TO POLICY 3, 9 (Manuel Castells & Gustavo Cardoso eds., 2005); FUCHS, *supra* note 1, at 87–88; KAREN GRASS & ENZO WEBER, INST. FOR EMP’T RESEARCH, EU 4.0—THE DEBATE ON DIGITALISATION AND THE LABOUR MARKET IN EUROPE 8 (IAB-Discussion Paper, Ser. No. 39, 2016); URSULA HUWS, THE MAKING OF A CYBERTARIAT: VIRTUAL WORK IN A REAL WORLD 166–67 (2003); LABOUR IN THE 21ST CENTURY: INSIGHTS INTO A CHANGING WORLD OF WORK, at vii–xiii (Katherine Stone, Emanuele Dagnino & Silvia Fernández Martínez eds., 2017); STONE, *supra* note 4, at 13–65.

⁷ See, e.g., YOCHAI BENKLER, ROBERT FARIS & HAL ROBERTS, NETWORK PROPAGANDA: MANIPULATION, DISINFORMATION, AND RADICALIZATION IN AMERICAN POLITICS (2018); JULIE E. COHEN, BETWEEN TRUTH AND POWER: THE LEGAL CONSTRUCTIONS OF INFORMATIONAL CAPITALISM (2019); LAWRENCE LESSIG, CODE 120–31 (2d ed. 2006); Yochai Benkler, *The Role of Technology in Political Economy: Part 1*, L. & POL. ECON. (July 25, 2018), <https://lpeproject.org/blog/the-role-of-technology-in-political-economy-part-1/>; Amy Kapczynski, *The Law of Informational Capitalism*, 129 YALE L.J. 1460, 1466–67 (2020) (book review).

⁸ See generally, e.g., GEORGE DYSON, TURING’S CATHEDRAL: THE ORIGINS OF THE DIGITAL UNIVERSE (2012) (particularly his powerful statement at page 308: “Facebook defines who we are, Amazon defines what we want, and Google defines what we think.”); MARY L. GRAY & SIDDHARTH SURI, GHOST WORK: HOW TO STOP SILICON VALLEY FROM BUILDING A NEW GLOBAL UNDERCLASS (2019) (focusing on crowdwork companies, and particularly Amazon Mechanical Turk); FRANK PASQUALE, THE BLACK BOX SOCIETY: THE SECRET ALGORITHMS THAT CONTROL MONEY AND INFORMATION (2015); ZUBOFF, *supra* note 2, at 15 (focusing on Google); Yochai Benkler, *Power and Productivity: Institutions, Ideology, and Technology in Political Economy*, in POLITICAL ECONOMY AND JUSTICE (forthcoming 2021), <https://ssrn.com/abstract=3503962>.

strengthening the power of capital to use technology for certain purposes.⁹

Alongside that, in the context of labor, much of the current writing is focused on the implications of technology for a certain bundle of labor rights or for particular themes in labor. This is true, for instance, of the scholarship on the vast implications of artificial intelligence (AI) and algorithm management for employees' specific rights to privacy, equality, and dignity;¹⁰ of the vast literature on the challenge of the end of work due to the emergence of robots and AI and its concrete influence on the right to work and future work conditions;¹¹ and of the scholarship on platform-based work—such as in Uber, Amazon Mechanical Turk, and Instacart—and its influence on the status of employees and their basic labor rights.¹²

⁹ See generally Amy Kapczynski, *The Access to Knowledge Mobilization and the New Politics of Intellectual Property*, 117 YALE L.J. 804 (2008) (regarding IP); Brishen Rogers, *The Law and Political Economy of Workplace Technological Change*, 55 HARV. C.R.-C.L. L. REV. 531 (2020) (regarding employment law); Lina M. Khan, Note, *Amazon's Antitrust Paradox*, 126 YALE L.J. 710 (2017) (regarding antitrust law).

¹⁰ See generally Solon Barocas & Andrew D. Selbst, *Big Data's Disparate Impact*, 104 CALIF. L. REV. 671 (2016); Matthew Bodie, Miriam A. Cherry, Marcia L. McCormick & Jintong Tang, *The Law and Policy of People Analytics*, 88 U. COLO. L. REV. 961 (2017); Pauline T. Kim, *Data-Driven Discrimination at Work*, 58 WM. & MARY L. REV. 857 (2017); Rogers, *supra* note 9; Valerio De Stefano, "Negotiating the Algorithm": *Automation, Artificial Intelligence and Labour Protection* (Int'l Lab. Office, Working Paper No. 246, 2018).

¹¹ See generally Cynthia L. Estlund, *What Should We Do After Work? Automation and Employment Law*, 128 YALE L.J. 254 (2018); Jeffrey M. Hirsch, *Future Work*, 2020 U. ILL. L. REV. 889 (2020); Thomas A. Kochan, *Shaping the Future of Work: Challenges and Opportunities for U.S. Labor Management Relations and Workplace Dispute Resolution*, 74 DISP. RESOL. J. 11 (2019); Lilach Lurie, *New Technologies, Old Problems: Collective Bargaining Agreements and Technology Changes in the Israeli Banking Sector*, 41 COMP. LAB. L. & POL'Y J. 695 (2021); Brishen Rogers, *Beyond Automation: The Law & Political Economy of Workplace Technological Change* (ROOSEVELT INST., WORKING PAPER, 2019), https://rooseveltinstitute.org/wp-content/uploads/2020/07/RI_Beyond-Automation_Working-Paper.pdf (a more elaborated version of this article can be found in Rogers, *supra* note 9).

¹² See generally GRAY & SURI, *supra* note 8; JEREMIAS PRASSL, *HUMANS AS SERVICE: THE PROMISE AND PERILS OF WORK IN THE GIG ECONOMY* (2018); JULIE B. SCHOR, *AFTER THE GIG: HOW THE SHARING ECONOMY GOT HIJACKED AND HOW TO WIN IT BACK* (2020); Miriam A. Cherry, *Beyond Misclassification: The Digital Transformation of Work*, 37 COMP. LAB. L. & POL'Y J. 577 (2016) [hereinafter Cherry, *Beyond Misclassification*]; Miriam Cherry, *Working for (Virtually) Minimum Wage: Applying the Fair Labor Standards Act in Cyberspace*, 60 ALA. L. REV. 1077 (2008) [hereinafter Cherry, *(Virtually) Minimum Wage*]; Valerio De Stefano, *The Rise of the "Just-in-Time Workforce": On-Demand Work, Crowdsourcing, and Labor Protection in the "Gig-Economy,"* 37 COMP. LAB. L. & POL'Y J. 471 (2016); Alek Felstiner, *Working the Crowd: Employment and Labor Law in the Crowdsourcing Industry*, 32 BERKELEY J. EMP. & LAB. L. 143 (2011); Orly Lobel, *The Law of the Platform*, 101 MINN. L. REV. 87 (2016); Benjamin Means & Joseph A. Seiner, *Navigating the Uber Economy*, 49 U.C. DAVIS L. REV. 1511 (2016); Brishen Rogers, *Employment Rights in the Platform Economy: Getting Back to Basics*, 10 HARV. L. & POL'Y REV. 479 (2016).

Focusing on concrete rights and themes in labor is highly important because it helps ensure the protection of those specific rights. However, to not miss the forest for the trees, it is also crucial at this stage to zoom out and track the common structure and logic of these phenomena, and many others, happening today in labor. It is also important to unpack which forces lead the labor field in specific directions and how these forces integrate and use digital technology to reach specific ends. In other words, due to the many modifications that the labor field has undergone in the digital reality, it is valuable to observe them from a bird's-eye view and locate their organizing logic. This is the main target of this Article. This Article aims to fill a gap in the literature today by unpacking the contemporary trends in labor resulting from the way digital technology is being used and manipulated by employers, tech companies, and cultural tendencies.

The main argument made throughout this Article is that diverse actors deploy technology today in a way that promotes more flexibility and fragility of the labor field and disturbs basic legal categories in labor, especially regarding time, spheres, and relations. This Article argues that new understandings and regulation of the current legal norms are required. This sort of zoomed-out description of the labor field is important for a better understanding of our reality. It is even more important to the tailoring of adjustable solutions to the challenges at hand.

This Article comprises three main parts. Part I deals with the theoretical backgrounds to the issues. It opens with a technological background and offers a brief description of the emergence of the digital reality and the various developments related to the internet and smart technology over the years. Then it examines the role that other forces in society, such as capital and the law, play in generating the various modifications that we encounter today. In its last Section, Part I provides a general sociological explanation of how the digital reality is characterized by greater flexibility and fragility than ever before.

On the basis of this socio-tech background, Part II explores in depth how the digital age has enabled employers, companies, and sometimes others, to blur and problematize four basic legal categories in labor—the private sphere of the employee, working time, the employment contract, and the employment community. By doing so, this Article demonstrates how the digital age—with its technological innovations and new cultural and social habits relating to the need to “live in public”—continually challenges the boundaries between employees’ private sphere and public-professional sphere and consequently challenges employees’ rights to privacy. Similarly, this Article illustrates how the traditional boundaries between work time and leisure time have become more amorphous in today’s world because of the constant use of information communication technology (ICT) in the workplace and at home. Thereafter, this Article describes how basic relationships in labor are also becoming more fragile in the digital reality. This is true in the traditional relationship between an employee and an employer as well as the traditional relationship between employees as part of a workers’ community. In this regard, this Article explains how

the emergence of platform-based work has disturbed the basic definitions of “employee” and “employer” as well as the distinct employment contract. Thereafter, this Article shows how platform-based work, along with the phenomena of telework, AI, and co-robots, have fissured the traditional concept of employees’ community.

Following the discussion of these modifications in the basics of labor law, Part III deals with the question of regulation. It offers three initial directions for regulation of legal issues in the digital reality. This Part argues that both law and technology have to be updated and modified to deal with the challenges at hand. In that regard, this Article suggests embracing flexibility as an interpretive tool, not just a threat to the protection of labor rights; adding a procedural layer to the basics of labor law that can be more sustainable in the face of all the modifications that the labor field is going through; and using technology as part of the solution, not just an obstacle to labor rights.

The contribution of this Article to the current literature is threefold. First, this Article combines three meaningful theoretical foundations underlying the issue of technology and labor law—the sociological literature on the digital reality, the scholarship on technology and its power dynamics with other actors, and the scholarship on technology and its implications on concrete labor rights. Second, this Article explores from a bird’s-eye view, for the very first time, the logic and structure of labor law in the digital reality and how it is being led in more fragile directions by certain actors. Finally, on the basis of the new understandings that are elaborated in this Article, it offers a new model of regulation of the challenges at hand and those to come.

I. THEORETICAL BACKGROUND: ON TECHNOLOGY, POWER DYNAMICS, AND THE SOCIOLOGY OF THE INTERNET

A. *On Technology: The Emergence of Digital Technology and the Internet*

The internet was incorporated into our lives in the 1990s.¹³ It has dramatically accelerated the digital age, which began in the mid- to late-twentieth century when computers became “the central nervous system of global production networks.”¹⁴ The ability of the internet to transfer information easily from one electronic device to another in a network system modified and perfected the original computer system.¹⁵

¹³ See JANET ABBATE, *INVENTING THE INTERNET* 1–6 (2000).

¹⁴ STONE, *supra* note 4, at 5.

¹⁵ For further elaboration, see Martha Garcia-Murillo, Ian MacInnes & Johannes M. Bauer, *Techno-Unemployment: A Framework for Assessing the Effects of Information and Communication Technologies on Work*, 35 *TELEMATICS AND INFORMATICS* 1863 (2018); James Murray, *Cloud Network Architecture and ICT*, MODERN NETWORK ARCHITECTURE (Dec. 18, 2011, 10:22 PM), <https://web.archive.org/web/20190515093922/https://itknowledgeexchange.techtarget.com/mo>

This ability is associated with information technology (IT) and ICT.¹⁶ IT and ICT enable the access, transfer, use, and storage of information on the internet.¹⁷ Some sociologists perceive the development of the internet as a distinct phenomenon in the digital reality and use various terms, such as “internet age,” “software world,” “cyber space,” and “network society,” to describe it.¹⁸

The digital reality and the internet age are not monolithic. Over the years, the internet has developed, generating new and more sophisticated forms of information flows.¹⁹ These are perceived as having occurred in different phases, starting with Web 1.0 and ending with Web 4.0 (or, some may say, Web 5.0).²⁰ Web 2.0 is considered to be the second generation of the World Wide Web and was introduced around 2004.²¹ Its core idea was to create a collaborative virtual medium (e.g., social media) through which people could write, read, interact with one another, and continuously share information with and about one another.²² This basic ability to share information has been perfected over the years and today also includes the ability to conduct commerce online.²³ In its current iteration as Web 4.0, and thanks to the AI revolution, the internet is used to access and analyze vast amounts of information and to reach conclusions.²⁴ Some of the current forms of AI can also look for underlying trends in the available data—whether it is structured or unstructured—to

dern-network-architecture/cloud-network-architecture-and-ict/.

¹⁶ Garcia-Murillo et al., *supra* note 15, at 1863–64; *see also* LEE RAINIE & BARRY WELLMAN, NETWORKED: THE NEW SOCIAL OPERATING SYSTEM 174–75 (2012); JUDY WAJCMAN, PRESSED FOR TIME: THE ACCELERATION OF LIFE IN DIGITAL CAPITALISM 91 (2015).

¹⁷ Murray, *supra* note 15.

¹⁸ Ursula Huws, *Working Online, Living Offline: Labour in the Internet Age*, 7 WORK ORG., LAB. & GLOBALISATION 1 (2013) (discussing the “internet age”); Zygmunt Bauman, *Time and Space Reunited*, 9 TIME & SOC’Y 171, 177–80 (2000) (discussing the “software world”); LESSIG, *supra* note 7, at 2–3 (discussing “cyber space,” and distinguishing between the “Internet” and “cyber space,” *id.* at 9); Castells, *supra* note 6, at 3–4 (discussing the “network society”).

¹⁹ *See, e.g.*, Orly Lobel, *The Gig Economy & the Future of Employment and Labor Law*, 51 U.S.F. L. REV. 51, 52 (2017).

²⁰ *See, e.g.*, Nupur Choudhury, *World Wide Web and Its Journey from Web 1.0 to Web 4.0*, 5 INT’L J. COMPUTER SCI. & INFO. TECHS. 8096 (2014); Karan Patel, *Incremental Journey for World Wide Web: Introduced with Web 1.0 to Recent Web 5.0 —A Survey Paper*, 3 INT’L J. ADVANCED RES. COMPUT. SCI. & SOFTWARE ENG’G 410 (2013).

²¹ Andreas M. Kaplan & Michael Haenlein, *Users of the World, Unite! The Challenges and Opportunities of Social Media*, 53 BUS. HORIZONS 59, 60–62 (2010).

²² WILL RICHARDSON, BLOGS, WIKIS, PODCASTS, AND OTHER POWERFUL WEB TOOLS FOR CLASSROOMS 1 (2d ed. 2009).

²³ It is also the basis of the platform economy. For further elaboration on the platform economy in the specific context of the workplace, see the references at *supra* note 12.

²⁴ For the use and important role of information in today’s technology, see PASQUALE, *supra* note 8, at 1–4, 19–36; NICK SRNICEK, PLATFORM CAPITALISM 40–42, 97–107 (2017). For further elaboration on the use of AI in the labour field, see, for example, Arianne Renan Barzilay, *Data Analytics at Work: A View from Israel on Employee Privacy and Equality in the Age of Data-Driven*

improve and perfect the AI program.²⁵ In today's world, systems exist that are "capable of performing tasks that would normally require human intelligence, such as recognition, decision-making, creation, learning, evolving, and communicating."²⁶

These various technological advances have enabled a meaningful change in labor over the years. However, as will be shown in the following Section, it is not only about technology. Digital technology is used and manipulated by other forces—such as employers, society, and the legal system—to reach certain ends. All of these forces together have led to greater fragility and blurriness in the labor field. In order to clarify this argument, I will locate it within two sorts of scholarship. The first, elaborated in Section I.B, deals with political economy and the power dynamics between technology, capital, society, and the law. The second, elaborated in Section I.C, deals with sociological theory of the digital era and shows how the digital reality is characterized by greater flexibility and fragility than ever before.

B. On Power Dynamics: Not Just Technology, Not Totally New

Leading scholars in legal, sociological, and internet scholarship have clarified that the modifications we encounter in the digital reality are not just about technology.²⁷ Sometimes, technology is a mere reflection of more powerful economic forces that lead to certain trends in society. Some scholars thus emphasize the Gordian knot between technology and the market, clarifying that technology tools "are always economic means, not ends in themselves."²⁸ This means that, eventually, "technology is itself crucially affected by the antagonistic class relations of production" and should be understood against the background of the specific goals and norms of the capitalist model.²⁹ In other words, this sort of Marxist point of view mainly sees in technology, and in the concrete opportunities it supposedly brings with it, another powerful tool of the capitalist model to promote and sustain itself.³⁰

Employment Management, 40 COMP. LAB. L. & POL'Y J. 421, 422–26 (2019); Bodie et al., *supra* note 10, at 964; De Stefano, *supra* note 10, at 7–8; Estlund, *supra* note 11; Hirsch, *supra* note 11.

²⁵ This phenomenon is defined as "machine learning" or "data analytics." See Rogers, *supra* note 11, at 14–19.

²⁶ Shlomit Yanisky-Ravid, *Generating Rembrandt: Artificial Intelligence, Copyright, and Accountability in the 3A Era—The Human-Like Authors Are Already Here—A New Model*, MICH. ST. L. REV. 659, 673 (2017). Note that AI is not identical to Web 4.0, and there might be AI systems that are not based on the internet platform.

²⁷ Cf. Yochai Benkler, *The Role of Technology in Political Economy: Part 2*, L. & POL. ECON. (July 26, 2018), <https://lpeproject.org/blog/the-role-of-technology-in-political-economy-part-2/>.

²⁸ ZUBOFF, *supra* note 2, at 15. Amy Kapczynski expressed reservations on Zuboff's seemingly Marxist point of view in Kapczynski, *supra* note 7, at 1474–75 (reviewing ZUBOFF, *supra* note 2).

²⁹ WAJCMAN, *supra* note 16, at 89.

³⁰ See generally MELISSA GREGG, WORK INTIMACY 39–40 (2011); HUWS, *supra* note 6, at 166–67; SRNICEK, *supra* note 24, at 6 (arguing that "capitalism has turned to data as one way to

Consistent with this perception, in the labor field context, we are about to see more cases in which corporations are taking advantage of the flexible structure that the digital reality enables to increase their profits, even at the expense of employees' rights.

Other scholars provide a more complex model in which the digital age's technology, or capital, is only one factor, albeit a powerful one, in the social, economic, and political dynamics in society.³¹ In this way, Lawrence Lessig demonstrated in his well-known book, *Code*, how the architecture of technology (particularly the architecture of the internet), along with the law, the market, and community norms, are jointly influencing questions of regulation and social behavior in the United States.³² In a similar manner, Yochai Benkler, Robert Faris, and Hal Roberts demonstrated how the shape of the American public discourse in the digital reality is not a mere result of new technologies and their implications on society and politics; rather, it is a result of technology along with the concrete political ecosystem of the United States.³³ In another work of Benkler, he demonstrated in depth how the digital age's technology is "a site of meaningful struggle risks" in society, yet "technology is neither exogenous nor deterministic" and cannot, by itself, determine the result of this social struggle.³⁴ Instead, technology evolves in response to a concrete political and social framework.³⁵ In this way, technology is the outcome of previous decisions and struggles in society and "can be designed to be otherwise" in the long term, but it also intrinsically enables or does not enable certain actions in the "here and now."³⁶ Another complex description of the role of technology in economic and sociological changes can be found in Julie Cohen's work. According to Cohen, "Information technologies are highly configurable, and their configurability offers multiple points of entry for interested and well-resourced parties to shape their development."³⁷

In light of these complex understandings, as will be shown in the following parts, when dealing with the phenomena of flexibility and fragility that the digital

maintain economic growth"); WAJCMAN, *supra* note 16, at 89; ZUBOFF, *supra* note 2, at 293–321 (arguing similarly and referring to big data technology, which collects and processes information, as means of capitalism).

³¹ See, e.g., PASQUALE, *supra* note 8, at 191–218; Kapczynski, *supra* note 7, at 1466–67 (reviewing COHEN, *supra* note 7).

³² See LESSIG, *supra* note 7, at 120–37.

³³ BENKLER ET AL., *supra* note 7, at 20–22 (comparing the "media ecosystems" in the United States and in Germany to demonstrate their point).

³⁴ Benkler, *supra* note 7.

³⁵ Yochai Benkler, *The Role of Technology in Political Economy: Part 3*, L. & POL. ECON. (July 27, 2018), <https://lpeproject.org/blog/the-role-of-technology-in-political-economy-part-3/>.

³⁶ *Id.*

³⁷ COHEN, *supra* note 7, at 1; see also Kapczynski, *supra* note 7, at 1485–86, 1491 (reviewing COHEN, *supra* note 7).

reality has increased in the labor field, it is important to bear in mind that technology is not the sole force behind these phenomena. Other powerful forces of capital and society seem to lead to this more flexible and chaotic direction and to use technology for this goal. However, alluding to Benkler, in the short term, because of its intrinsic features, the internet enables these forces to more easily do so. Similarly, it is important to bear in mind that greater flexibility is not the sole or an inevitable result of the digital reality. As will be seen in the next Part, the internet has indeed enabled more flexibility and flow of information.³⁸ However, the internet could enable more participation of more actors in this flexibility process or impose limitations on this flexible structure if it were programmed differently.³⁹ In the last Part of this Article, I will refer to this point and offer other potential uses of digital technology to protect labor rights or to limit the flexible structure of the modern workplace. However, before doing so, it is important to understand what is *currently* at stake—that is, *which current trends and phenomena digital technology facilitates due to various intrinsic and exogenous social, political, and cultural powers*.

Similarly, in addition to considering that technology is not the sole force behind various social modifications, we must also treat these modifications humbly. In other words, the digital reality, and particularly the internet, has not created something totally new out of nowhere. Instead, technology has emphasized and accelerated the implications of certain social phenomena and, as a corollary, underlined the importance of searching for better legal solutions. Jack Balkin clarifies this notion by arguing that,

to ask, “What is genuinely new here?” is to ask the wrong question Instead of focusing on novelty, we should focus on salience. What elements of the social world does a new technology make particularly salient that went relatively unnoticed before? What features of human activity or of the human condition does a technological change foreground, emphasize, or problematize? And what are the consequences for human freedom of making this aspect more important, more pervasive, or more central than it was before?⁴⁰

Consistent with Balkin’s understandings, the examples that will be provided in the following Parts demonstrate that the flexibility process that the modern workplace is going through is not totally new. Privacy, working time, the employment contract, and workers’ community were always areas of struggle in which employers, companies, employees, and sometimes all of society attempted to stretch distinct boundaries.

³⁸ YOCHAI BENKLER, *THE WEALTH OF NETWORKS: HOW SOCIAL PRODUCTION TRANSFORMS MARKETS AND FREEDOM* 29–34 (2006); MANUEL CASTELLS, *COMMUNICATION POWER* 48–51 (2009).

³⁹ LESSIG, *supra* note 7, at 31–37.

⁴⁰ Jack M. Balkin, *Digital Speech and Democratic Culture: A Theory of Freedom of Expression for the Information Society*, 79 N.Y.U. L. REV. 1, 2–3 (2004).

Digital technology has only emphasized and strengthened the phenomena of flexibility and fluidity that were always present in these areas. However, exposing the way in which the digital reality has enabled various actors to strengthen these phenomena is of great importance, as is exposing the implications of these phenomena on labor, capital, and society and the way in which the law has been silenced regarding them. This will be the target of Parts II and III.

C. On the Digital Reality: The Acceleration of Flexibility, Fragility, and Liquidity in Today's World

One of the basic capabilities of the internet is that it seems to “dematerialize” our world.⁴¹ As the tech-sociologist Ursula Huws describes it, in the internet age, “We are offered a paradoxical universe: geography without distance, history without time, value without weight, transactions without cash.”⁴² In other words, since the internet can seemingly release us from physical limitations and from any concrete restrictions of time and place, it has the potential to make the well-known categories and boundaries of daily life more fluid and flexible than before.⁴³ Similarly, the sociologist and philosopher Zygmunt Bauman argued in 2000 that due to technology, among other forces, we live today in a “liquid modernity.”⁴⁴ Time and place, community, and even individual identity are becoming more “liquid” and flexible than ever before, and diverse aspects of our lives are characterized by “fragility, temporariness, vulnerability and inclination to constant change.”⁴⁵

This fluidity that the internet has enabled has penetrated the labor field. The last few decades have seen the proliferation of new work arrangements that, regardless of the internet infrastructure, are more flexible in nature and often lead to more insecurity for workers and their basic rights.⁴⁶ Even at the beginning of the previous century, employers tended to maintain more flexibility in the workplace—usually for their own good—and struggled to have a flexible work schedule.⁴⁷ The digital reality has amplified this phenomenon in recent years,⁴⁸ and it has generated more flexibility in diverse aspects of various forms of work.⁴⁹

⁴¹ HUWS, *supra* note 6, at 126.

⁴² *Id.* Note that Huws aims to demonstrate how things are more complex than they might seem to be at first glance, *id.* at 147 and thereafter.

⁴³ FUCHS, *supra* note 1, at 7, 232–33; HUWS, *supra* note 1, at 10–14.

⁴⁴ BAUMAN, *supra* note 6, at 177–80.

⁴⁵ ZYGMUNT BAUMAN, LIQUID MODERNITY, at ii (16th prtg. 2012).

⁴⁶ See, e.g., Guy Davidov, *The Three Axes of Employment Relationships: A Characterization of Workers in Need of Protection*, 52 U. TORONTO L.J. 357, 363–65 (2002).

⁴⁷ See, e.g., Means & Seiner, *supra* note 12, at 1521.

⁴⁸ *Id.* at 1536.

⁴⁹ DAPHNÉ VALSAMIS, AN DE COEN & VALENTJN VANOETEREN, EUROPEAN PARLIAMENT, THE FUTURE OF WORK: DIGITALISATION IN THE US LABOUR MARKET 7, 26–27 (Mar. 2016),

Leading scholars from sociology and internet studies emphasize in their writing that the workplace of today is more fragile and fluid than in the past. In this regard, as part of his general writing on the “liquid modernity,” Bauman focuses on labor and argues that in the “software world,” humanity has gone through a “great transformation”—the “disembodiment” of human labor.⁵⁰ Bauman explains how this allows capital to be volatile and fickle and thus to generate complete uncertainty in the labor market and social division within it.⁵¹ Put differently, the traditional workplace, which was based on clear roles and division of labor, and which usually ensured the worker a secure position for long periods, is diminishing in the digital reality.⁵² Therefore, in his dramatic words, Bauman declares that flexibility has become “the slogan of the day,” and we have reached the “end [of] the ‘job as we know it.’”⁵³ In a similar manner, Huws demonstrates that the growing use of computers and technology—along with the vast expansion of the potential labor pool—makes it almost impossible to establish stability in the labor field, particularly regarding workers’ identity or their professional knowledge.⁵⁴ In Huws’s words, “the only thing that can be predicted with certainty is that there will be more change.”⁵⁵ The tech-sociologist Manuel Castells similarly explains that in the digital reality, “flexibility of employment, mobility of labor, and constant re-skilling of the workforce” are regularly occurring on a global scale and creating a fragile and unstable global labor market.⁵⁶ Likewise, Cohen shows how the centrality of digital networks in workplaces today has made work more de-territorialized and fissured than ever before.⁵⁷

These theoretical arguments create the impression that the growing flexibility of the modern workplace is necessarily bad for employees. However, the fact that work can be conducted today in a more flexible manner with respect to a worker’s location or exact working time is often associated with greater creativity and pleasure from work⁵⁸ and with more freedom for workers to switch jobs if they wish.⁵⁹

https://www.europarl.europa.eu/RegData/etudes/BRIE/2016/578959/IPOL_BRI%282016%29578959_EN.pdf.

⁵⁰ Bauman, *supra* note 18, at 179–80.

⁵¹ *Id.*

⁵² STONE, *supra* note 4, at 38–41, 67–70.

⁵³ BAUMAN, *supra* note 6, at 147.

⁵⁴ HUWS, *supra* note 6, at 166–67.

⁵⁵ *Id.* at 167.

⁵⁶ Castells, *supra* note 6, at 9.

⁵⁷ COHEN, *supra* note 7, at 31–33; Kapczynski, *supra* note 7, at 1488 (reviewing COHEN, *supra* note 7).

⁵⁸ Laurel A. McNall, Aline D. Masuda & Jessica M. Nicklin, *Flexible Work Arrangements, Job Satisfaction, and Turnover Intentions: The Mediating Role of Work-to-Family Enrichment*, 144 J. PSYCHOL. 61 (2009).

⁵⁹ JAMES MANYIKA, SUSAN LUND, MICHAEL CHUI, JACQUES BUGHIN, JONATHAN

Moreover, flexibility—especially regarding the ability of a worker to choose whether, where, and when to work—strengthens the worker’s feelings of autonomy and control over work, and it can more easily be adjusted to family life and promote a better work-life balance.⁶⁰

And yet, despite these advantages, the amorphous nature of labor in the digital reality ultimately seems to have problematic implications for workers’ basic rights.⁶¹ The next and main Part of this Article focuses on what this fluidity and its implications are for labor rights in real life, as well as on how exactly technology leads in this specific direction and who is behind it doing so. The following Parts will demonstrate how various legal categories that used to have some clarity in the past are being challenged and blurred in today’s world because of the ways in which different actors use and manipulate technology in the workplace context.

II. FLEXIBILITY IN LABOR IN THE DIGITAL REALITY: FOUR EXAMPLES

In this main Part of this Article I provide four concrete examples of the implications of flexibility in the digital reality for labor. I concentrate on the way in which the internet has enabled the blurriness and flexibility of four central legal categories in labor: (1) the boundaries between the private sphere and public sphere and the right to privacy, (2) the boundaries of time and space, (3) the traditional employment relationship, and (4) the relationships between employees within the workplace.

A. *Spheres: The Boundaries Between the Private and the Professional*

The blurring of the boundary between an employee’s public and private spheres is a good example to start with. This is so because it demonstrates well how it is not only about technology. Various social and economic actors are also factors in this phenomenon.

WOETZEL, PARUL BATRA, RYAN KO & SAURABH SANGHVI, MCKINSEY GLOBAL INSTITUTE, JOBS LOST, JOBS GAINED: WORKFORCE TRANSITIONS IN A TIME OF AUTOMATION 114 (2017); Hirsch, *supra* note 11, at 922.

⁶⁰ GREGG, *supra* note 30, at 39–40; Lonnie Golden & Jaeseung Kim, *Irregular Work Scheduling and Its Consequences*, in 98 BULLETIN OF COMPARATIVE LABOUR RELATIONS: WORK-LIFE BALANCE IN THE MODERN WORKPLACE 115, 129–30 (Sarah De Groof ed., 2017); Phyllis Moen, Erin L. Kelly, Wen Fan, Shi-Rong Lee, David Almeida, Ellen Ernst Kossek & Orfeu M. Buxton, *Does a Flexibility/Support Organizational Initiative Improve High-Tech Employees’ Well-Being? Evidence from the Work, Family, and Health Network*, 81 AM. SOC. REV. 134 (2016); see also Jonathan V. Hall & Alan B. Krueger, *An Analysis of the Labor Market for Uber’s Driver-Partners in the United States*, 71 ILR REV. 705, 714 (2018) (discussing the preferences of Uber drivers in this context).

⁶¹ Dau-Schmidt, *supra* note 2, at 1594–98.

The right to privacy was adopted as a constitutional right by the U.S. Supreme Court, and its scope and substance have evolved over the years.⁶² The right to privacy was established to afford the individual a space of her own, protected from the intrusion of others—particularly that of the state.⁶³ The distinction between an employee's private sphere and her professional sphere was developed later as part of the establishment of labor rights.⁶⁴ It mainly involved the questions of whether the employer has a legitimate business interest in entering the private sphere of the employee and whether the employee has a reasonable expectation of privacy.⁶⁵ U.S. scholars interpret the right to privacy as ensuring the employee a private sphere that is detached from her professional one and not controlled or supervised by the employer.⁶⁶

There are various justifications of the need for privacy in the workplace context. Privacy is considered to stem from the employee's right to autonomy, and specifically her right to determine for herself to what extent private information about her will be communicated to the employer.⁶⁷ Privacy is also associated with the employee's dignity, her need to flourish as a human being, and the importance of viewing her as more than a tool to raise the employer's profit.⁶⁸ It is also linked to the

⁶² See DANIEL J. SOLOVE, UNDERSTANDING PRIVACY 2–3, 112–17 (2008).

⁶³ The first and most well-known reference to the notion of privacy can be found in Samuel D. Warren & Louis D. Brandeis, *The Right to Privacy*, 4 HARV. L. REV. 193, 198 (1890). For other definitions of privacy, see LESSIG, *supra* note 7, at 210–13; ALAN F. WESTIN, PRIVACY AND FREEDOM 7–13 (1967); Edward J. Bloustein, *Privacy as an Aspect of Human Dignity: An Answer to Dean Prosser*, 39 N.Y.U. L. REV. 962, 971 (1964); Janis L. Goldie, *Virtual Communities and the Social Dimension of Privacy*, 3 U. OTTAWA L. & TECH. J. 133, 136 (2006); Edward Shils, *Privacy: Its Constitution and Vicissitudes*, 31 L. & CONTEMP. PROBS. 281, 281–306 (1966); Daniel J. Solove, *Conceptualizing Privacy*, 90 CALIF. L. REV. 1087, 1099–1124 (2002).

⁶⁴ See generally Matthew W. Finkin, *Menschenbild: The Conception of the Employee as a Person in Western Law*, 23 COMP. LAB. L. & POL'Y J. 577, 580–86 (2002); Paul F. Gerhart, *Employee Privacy Rights in the United States*, 17 COMP. LAB. L.J. 175, 183–90 (1995); Jed Rubinfeld, *The Right of Privacy*, 102 HARV. L. REV. 737, 744–47 (1989); Benjamin I. Sachs, *Privacy as Sphere Autonomy*, in 88 BULLETIN OF COMPARATIVE LABOUR RELATIONS: PROTECTION OF EMPLOYEES' PERSONAL INFORMATION AND PRIVACY 233 (Roger Blanpain, Hiriyoya Nakakubo & Takashi Araki eds., 2014).

⁶⁵ See Matthew Finkin, *Chapter 7: Privacy and Autonomy*, 21 EMP. RTS. & EMP. POL'Y J. 589, 593–601 (2017).

⁶⁶ See sources cited *supra* note 64.

⁶⁷ Finkin, *supra* note 64, at 615–16; Sachs, *supra* note 64 at 233–35.

⁶⁸ Bloustein, *supra* note 63, at 971.

notions of equality⁶⁹ and freedom of speech.⁷⁰ This is so because, through data collection, the employer may make a discriminatory/silencing decision that goes against the employee. However, despite privacy's importance, employees' right to privacy and the distinction between the private and the public spheres are continually blurred in today's world. As will be demonstrated in this Part, this is mainly because of the pervasive use of smart technology by employers, and citizens' frequent participation on social media sites.

1. *Supervising Employees in the Digital Reality*

The first and most obvious threat to privacy in the digital reality is the will of the employer to supervise her employees—which always existed—along with sophisticated new methods of supervision available to employers today.⁷¹ In the digital reality, employers can easily monitor their employees in various ways, ranging from “ordinary” monitoring, such as reading employees' e-mails,⁷² to more sophisticated approaches, such as using a wristband that can track every move of the employee and identify every time she has paused “to scratch or fidget,”⁷³ or installing an application that can constantly record and analyze an employee's voice and tone.⁷⁴ The technology of today makes this whole process of supervising easier to manage. It enables the employer to supervise employees even without their awareness, often at a relatively low cost.⁷⁵ Consequently, supervising employees has become a simple and common routine in numerous workplaces around the world.⁷⁶

⁶⁹ Richard Bruyer, *Privacy: A Review and Critique of the Literature*, 43 ALTA. L. REV. 533, 553, 587–88 (2006); Lisa Austin, *Privacy and the Question of Technology*, 22 L. & PHIL. 119, 144–45 (2003).

⁷⁰ Alexander Hertel-Fernandez & Paul Secunda, *Citizens Coerced: A Legislative Fix for Workplace Political Intimidation Post-Citizens United*, 64 UCLA L. REV. DISCOURSE 2, 5–9 (2016); Scott Skinner-Thompson, *Performative Privacy*, 50 U.C. DAVIS L. REV. 1673, 1676 (2017).

⁷¹ CHRISTIAN FUCHS, CRITICAL THEORY OF COMMUNICATION: NEW READINGS OF LUKÁCS, ADORNO, MARCUSE, HONNETH AND HABERMAS IN THE AGE OF THE INTERNET 133 (2016); Ifeoma Ajunwa, Kate Crawford & Jason Schultz, *Limitless Worker Surveillance*, 105 CALIF. L. REV. 735, 737–40 (2017); Bodie et. al., *supra* note 10 at 987; Leora Eisenstadt, *Data Analytics and the Erosion of the Work/Nonwork Divide*, 56 AM. BUS. L.J. 445, 446–48 (2019); Kim, *supra* note 10, at 860–61.

⁷² See, e.g., *Bărbulescu v. Romania*, App. No. 61496/08, Eur. Ct. H.R. (2017).

⁷³ Ceylan Yeginsu, *If Workers Slack Off, the Wristband Will Know. (And Amazon Has a Patent for It.)*, N.Y. TIMES (Feb. 1, 2018), <https://www.nytimes.com/2018/02/01/technology/amazon-wristband-tracking-privacy.html>.

⁷⁴ Bodie et al., *supra* note 10, at 963.

⁷⁵ MICHAEL BIRNHACK, PRIVATE SPHERE: THE RIGHT TO PRIVACY BETWEEN LAW AND TECHNOLOGY 418–20 (2011) (Hebrew); LESSIG, *supra* note 7, at 205; Goldie, *supra* note 63, at 143.

⁷⁶ Bart Custers & Helena Ursic, *Worker Privacy in a Digitalized World Under European Law*, 39 COMP. LAB. L. & POL'Y J. 323 (2018).

The technology of the digital reality has dramatically extended an employer's ability to supervise employees well beyond the classical time and space boundaries of the workplace.⁷⁷ In other words, while it seems reasonable that the employer will be allowed to supervise her employees during their formal working hours for professional purposes, technology enables the employer to easily track the activity of an employee even outside the workplace and even if it is unrelated to the employee's work.⁷⁸ For instance, an employer can track employees' locations 24/7, even during their distinct private time,⁷⁹ or follow their activity on their Facebook pages.⁸⁰ Technology even makes it possible for employers to discover past information about an employee created well before she became an employee in the concrete workplace.⁸¹

AI technology has dramatically perfected employers' ability to do so. Employers usually use AI as part of the recruitment process to vet large private amounts of candidate information.⁸² AI programs can collect all, or nearly all, the available online data on the candidate—regardless of when it was created and even if it is a nuanced piece of information related to something the candidate did in her youth.⁸³ AI makes it possible to analyze this vast amount of information and draw conclusions about the characteristics of a candidate.⁸⁴ In other words, AI enables the employer not only to collect vast amounts of current and past private information about candidates but also to automatically process it and draw conclusions from it about their behavior and character.⁸⁵

Since the supervision of employees and the collection of information about both employees and candidates, even during and in relation to their private time and place, has become so easy and common, the explicit distinction between their private and public spheres is *de facto* being intensively blurred and flexed today.⁸⁶ Equally, the notion of an employee's right to privacy is becoming fragile and difficult to sustain in our digital reality.

⁷⁷ See sources cited *supra* note 71.

⁷⁸ See Sachs, *supra* note 64 at 245–47.

⁷⁹ Ajunwa et al., *supra* note 71, at 743.

⁸⁰ Thanks to the use of AI. See *infra* notes 82–85.

⁸¹ See *infra* notes 82–85.

⁸² Bodie et al., *supra* note 10, at 985–1006; Hirsch, *supra* note 11 at 937–40; Rogers, *supra* note 11, at 26.

⁸³ Barzilay, *supra* note 24, at 422–26; Bodie et al., *supra* note 10, at 1014–18; Hirsch, *supra* note 11, at 937–40; Rogers, *supra* note 11, at 26.

⁸⁴ See sources cited *supra* note 83.

⁸⁵ Bodie et al., *supra* note 10, at 1014–18.

⁸⁶ Eisenstadt, *supra* note 71, at 446–48.

2. *The Privacy Paradox*

Along with the sophisticated technological innovations that enable an employer to easily supervise employees in their private spheres, the digital reality encourages social behaviors that further blur and disturb the traditional distinction between employees' private and professional spheres. Today, we encounter two parallel phenomena. First, people tend to share private information online without fully understanding this exposure and its implications in the workplace. Second, they tend to forward and share other people's private information and to discipline and "shame" one another online.

The tendency of a private individual to share private information online is bound to the emergence of Web 2.0 and the proliferation of social network sites.⁸⁷ Of course, people have always shared private information about themselves and interacted socially.⁸⁸ But the emergence of Web 2.0 and social media sites—which encourage people to interact, write, and share information online with and about one another—has dramatically amplified this human tendency.⁸⁹ And indeed, today numerous people participate on social media sites and share private information online. A 2019 survey by the Pew Research Center indicates that 69% of the adult respondents use Facebook.⁹⁰ Among young people ages 18 to 29, 67% use Instagram and 62% use Snapchat.⁹¹

When people participate on social media sites, they tend to share more private aspects of their lives⁹² and to post a significant amount of authentic information about themselves.⁹³ Social media sites allow a person to shift from one community

⁸⁷ Zizi Papacharissi & Paige L. Gibson, *Fifteen Minutes of Privacy: Privacy, Sociality, and Publicity on Social Network Sites*, in *PRIVACY ONLINE: PERSPECTIVES ON PRIVACY AND SELF-DISCLOSURE IN THE SOCIAL WEB* 75, 75–87 (Sabine Trepte & Leonard Reinecke eds., 2011).

⁸⁸ Priscilla M. Regan, *Genetic Testing and Workplace Surveillance: Implications for Privacy*, in *COMPUTERS, SURVEILLANCE, AND PRIVACY* 21, 32 (David Lyon & Elia Zureik eds., 1996); Shils, *supra* note 63, at 286–88.

⁸⁹ FUCHS, *supra* note 71, at 122, 134–35; RICHARDSON, *supra* note 22, at 1; *see also* DANIEL MILLER, ELISABETTA COSTA, NELL HAYNES, TOM McDONALD, RAZVAN NICOLESCU, JOLYNNA SINANAN, JULIANO SPYER, SHRIRAM VENKATRAMAN & XINYUAN WANG, *HOW THE WORLD CHANGED SOCIAL MEDIA* 1–24 (2016); Kaplan & Haenlein, *supra* note 21.

⁹⁰ Andrew Perrin & Monica Anderson, *Share of U.S. Adults Using Social Media, Including Facebook, Is Mostly Unchanged Since 2018*, PEW RES. CTR. (Apr. 10, 2019), <https://www.pewresearch.org/fact-tank/2019/04/10/share-of-u-s-adults-using-social-media-including-facebook-is-mostly-unchanged-since-2018/>.

⁹¹ *Id.*

⁹² Bernd Marcus, Franz Machilek & Astrid Schütz, *Personality in Cyberspace: Personal Web Sites as Media for Personality Expressions and Impressions*, 90 *J. PERSONALITY & SOC. PSYCHOL.* 1014, 1024–30 (2006); Michael Zimmer, "But the Data Is Already Public": *On the Ethics of Research in Facebook*, 12 *ETHICS & INFO. TECH.* 313 (2010).

⁹³ Avner Levin & Patricia Sánchez Abril, *Two Notions of Privacy Online*, 11 *VAND. J. ENT. & TECH. L.* 1001, 1025 (2009); Susan B. Barnes, *A Privacy Paradox: Social Networking in the*

to another easily and, supposedly, reveal different types of private information in each. However, the internet also makes it easier to forward information from one community to another, without the subject's explicit consent, and to keep that information online forever.⁹⁴ As a result of many cognitive biases, such as the "generic sympathetic reader"⁹⁵ and present biases,⁹⁶ people tend to misunderstand this capability and thus share a great deal of private information online without fully understanding that it can easily be forwarded and hence reach their employer (or future employer). Additionally, scholars demonstrate how commercial companies use technology to reconstruct our actions and influence social preferences through a process of communication.⁹⁷ It frequently seems that the only way to operate in our reality and be part of the social fabric is by providing large amounts of information to third parties (such as Google, Facebook, and smartphone apps).⁹⁸ As we saw earlier, employers can often access this information and learn about an employee's private life.

Following this, scholars argue that social media sites can lead to the integration of the private and public spheres into a new place—the "no place."⁹⁹ This means that people share much of their private information on social network sites and consider it private as long as they do not disclose it outside of the network with which they initially shared it.¹⁰⁰ In this way, social media sites are governed by both the private and the public realms,¹⁰¹ and privacy becomes a paradoxical value that is more "public" than ever before.¹⁰² In other words, common activity on social media

United States, 11 FIRST MONDAY 1, 2 (Sep. 4, 2006), <http://firstmonday.org/ojs/index.php/fm/article/view/1394/1312>.

⁹⁴ BENKLER, *supra* note 38, at 29–34; CASTELLS, *supra* note 38, at 48–51; Goldie, *supra* note 63, at 143–45.

⁹⁵ Daria Dayter & Susanne Mühleisen, *Telling Stories About Self in Digital Contexts: Same, Same, but Different?* 2 OPEN LINGUISTICS 572, 574 (2016); Alice E. Marwick & danah boyd, *I Tweet Honestly, I Tweet Passionately: Twitter Users, Context Collapse, and the Imagined Audience*, 13 NEW MEDIA & SOC'Y 114, 116 (2010).

⁹⁶ Christine Jolls, Cass R. Sunstein & Richard Thaler, *A Behavioral Approach to Law and Economics*, 50 STAN. L. REV. 1471, 1538–39 (1998) (referring to the present bias mostly in the context of criminal law).

⁹⁷ See PASQUALE, *supra* note 8; SRNICEK, *supra* note 24; ZUBOFF, *supra* note 2, at 4.

⁹⁸ Papacharissi & Gibson, *supra* note 87, at 75–80.

⁹⁹ Zizi Papacharissi, *The Virtual Geographies of Social Networks: A Comparative Analysis of Facebook, LinkedIn, and ASmallWorld*, 11 NEW MEDIA & SOC'Y 199, 206–07 (2009); Barnes, *supra* note 93.

¹⁰⁰ See Patricia A. Norberg, Daniel R. Horne & David A. Horne, *The Privacy Paradox: Personal Information Disclosure Intentions Versus Behaviors*, 41 J. CONSUMER AFF. 100, 101, 118 (2007); Zizi Papacharissi, *The Virtual Sphere: The Internet as a Public Sphere*, 4 NEW MEDIA & SOC'Y 9, 20 (2002); Barnes, *supra* note 93. All of these discuss the "privacy paradox."

¹⁰¹ MILLER ET AL., *supra* note 89, at 2.

¹⁰² See generally LESSIG, *supra* note 7, at 202 (offering the term "privacy in public"); Austin, *supra* note 69, at 122–23; Levin & Sánchez-Abril, *supra* note 93, at 1045 (calling this

sites has made the traditional notion of privacy, and the explicit distinctions between the public and the private spheres, substantially flexible in today's world.

3. *Online Shaming*

Interest in supervising people, and the ability to do so in the digital reality, is not limited to employers or the workplace context. As Castells has argued, we live today in a “network society” in which new actors can wield power and display a desire to supervise the behavior of others online.¹⁰³ In this regard, the well-known phenomenon of online shaming has emerged and generated new and informal forms of social control.¹⁰⁴ The phenomenon of online shaming features various actors participating in different forms of informal social control on the internet: they shame a person for her supposedly poor behavior and spread the shaming all over the net.¹⁰⁵ An individual's sexual,¹⁰⁶ provocative,¹⁰⁷ racist,¹⁰⁸ or political¹⁰⁹ behavior—all of which are usually not related to her workplace—can lead to online public aversion and shaming for that behavior. When this occurs, the “real” supervisor (i.e., the employer) is often compelled by the mass shamers to act immediately and dismiss the “mischievous” employee who was shamed online.¹¹⁰ Moreover, a potential future employer can also be exposed to the shaming and may make professional decisions on the basis of the private behavior of a candidate.¹¹¹

phenomenon “network privacy”); Skinner-Thompson, *supra* note 70, at 1679–80.

¹⁰³ Manuel Castells, *A Network Theory of Power*, 5 INT'L J. COMM. 773 (2011).

¹⁰⁴ Toni M. Massaro, *The Meanings of Shame: Implications for Legal Reform*, 3 PSYCHOL. PUB. POL'Y & L. 645 (1997) (discussing shame as a means of informal social control).

¹⁰⁵ Scott R. Stroud, *The Jaina Rhetoric of Nonviolence and the Culture of Online Shaming*, in ANCIENT RHETORICS AND DIGITAL NETWORKS 252, 253, 264 (Michelle Kennerly & Damien Smith Pfister eds., 2018).

¹⁰⁶ DANIELLE KEATS CITRON, HATE CRIMES IN CYBERSPACE 181–84 (2014) [hereinafter CITRON, HATE CRIMES IN CYBERSPACE]; Danielle Keats Citron, *Law's Expressive Value in Combating Cyber Gender Harassment*, 108 MICH. L. REV. 373, 386–87 (2009) [hereinafter Citron, *Cyber Gender Harassment*].

¹⁰⁷ See, e.g., JON RONSON, SO YOU'VE BEEN PUBLICLY SHAMED 206–07 (2015) (discussing the case of Lindsey Stone).

¹⁰⁸ See, e.g., Stroud, *supra* note 105, at 255–59; Soraya McDonald, ‘Racists Getting Fired’ Exposes Weaknesses of Internet Vigilantism, No Matter How Well-Intentioned, WASH. POST (Dec. 2, 2014, 2:30 AM), <https://www.washingtonpost.com/news/morning-mix/wp/2014/12/02/racists-getting-fired-exposes-weaknesses-of-internet-vigilantism-no-matter-how-well-intentioned>.

¹⁰⁹ See, e.g., RONSON, *supra* note 107, at 111–35 (discussing the case of the feminist blogger Adria Richards).

¹¹⁰ RONSON, *supra* note 107, at 121–31, 201–04, 210–25, 264–76; Stroud, *supra* note 105, at 257–58; see also David S. Wall & Matthew Williams, *Policing Diversity in the Digital Age*, 7 CRIMINOLOGY & CRIM. JUST. 391, 404 (2007) (discussing online shaming and the “benefit of immediacy” that “amplifie[s]” the impact of shaming so “wrongdoers know instantly that they have done something wrong”).

¹¹¹ See sources cited *supra* note 110; see also CITRON, HATE CRIMES IN CYBERSPACE *supra*

Because of all these phenomena, the distinction between what is perceived as public and what is perceived as private has been shaken by the digital reality. Employers, society, and employees are constantly challenging and blurring the traditional meaning and boundaries of the legal category of privacy. The privacy example is particularly interesting because it demonstrates well that it is not only about technology. The current legal situation allows employers to use technology to more extensively supervise their employees and gather information about candidates, and, in doing so, disturb the basic tenets of the right to privacy.¹¹² In parallel, forces of commerce (social media sites, such as Facebook and Instagram) and social tendencies (such as the “shaming” phenomenon) also use technology in a way that blurs the boundaries between the private and public/professional spheres.

In a similar manner, as will be demonstrated in the following example, the technology of the digital reality has enabled the relevant parties to mix not only an employee’s private and professional identity and spheres, but also her private and professional time.

B. Time: The Boundaries of Working Time and Space

The idea of having working time units distinct from other time units developed during the industrial capitalism era.¹¹³ Working time was perceived then as a way to turn labor power into a commodity that is traded by the employee for her living.¹¹⁴ It was understood as a tool for disciplining employees—the employer controls the employee’s time during the workday and ensures that it is not “wasted” on activities that are not related to work.¹¹⁵ The notion of employment as a contract governing time remains relevant today.¹¹⁶ During their working time, employees are supposed to be subordinate to the employer’s will and to conduct work; only in their free time may employees act as they wish.

However, unlike in the past, in today’s world, the distinction between working time and leisure time is considered to be a significant element of labor law that aims

note 106; Citron, *Cyber Gender Harassment*, *supra* note 106, at 386.

¹¹² Cf. Rogers, *supra* note 9.

¹¹³ DAVID HARVEY, *THE URBAN EXPERIENCE* 19 (1989) (explaining that work is based on time and space, since “labor power has to go home every night”); *see also* Mark Graham & Mohammad Amir Anwar, *Digital Labour*, in *DIGITAL GEOGRAPHIES* (James Ash, Rob Kitchin, & Agnieszka Leszczynski eds., 2018); Émilie Genin, *Proposal for a Theoretical Framework for the Analysis of Time Porosity*, 32 *INT’L J. COMP. LAB. L. & INDUS. REL.* 280 (2016); E.P. Thompson, *Time, Work-Discipline and Industrial Capitalism*, 38 *PAST & PRESENT* 56 (1967).

¹¹⁴ MOISHE POSTONE, *TIME, LABOUR, AND SOCIAL DOMINATION: A REINTERPRETATION OF MARX’S CRITICAL THEORY* 292–99 (1993).

¹¹⁵ Thompson, *supra* note 113, at 61, 82–86.

¹¹⁶ Hugh Collins, *The Right to Flexibility*, in *LABOUR LAW, WORK, AND FAMILY: CRITICAL AND COMPARATIVE PERSPECTIVES* 99 (Joanne Conaghan & Kerry Rittich eds., 2005).

to protect employee rights.¹¹⁷ This is because the distinction between working time and leisure time has far-reaching implications for employees' personal lives.¹¹⁸ It can ensure the employee's physical and mental health and well-being.¹¹⁹ The notion and boundaries of working time are also important to preserve the employee's dignity and to allow her to be seen as more than a tool for increasing the employer's profit.¹²⁰ Similarly, given the employee's dependency on the employer, the regulation of working time and its connection to payment is needed to ensure that the employee can enjoy her basic labor rights without being dependent on the employer's goodwill.¹²¹ The regulation of working time is also important because it enables more people to enjoy employment opportunities.¹²²

Many labor laws have been enacted over the years that are based on working time categories. The employee's salary is usually based on her actual working time.¹²³ The employee is often entitled to a break during the working day after a specified number of working hours.¹²⁴ In many professions, the working day is limited to a certain number of hours¹²⁵ and the employee is entitled to overtime pay if she exceeds them.¹²⁶ Finally, in many occupations, working time is confined to specific periods of the day, excluding nights and weekends.

And yet, despite the centrality of the distinction between working time and leisure time in labor law, in today's world, it is blurred and flexed in practice. To be sure, people have always been encouraged to work more, so this type of blurriness

¹¹⁷ SIMON DEAKIN & GILLIAN S. MORRIS, *LABOUR LAW* 332 (6th ed. 2012).

¹¹⁸ INT'L LABOUR OFFICE, *ENSURING DECENT WORKING TIME FOR THE FUTURE* 2–4 (2018), http://www.ilo.org/wcmsp5/groups/public/ed_norm/relconf/documents/meetingdocument/wcms_618485.pdf.

¹¹⁹ *Id.*; GUY DAVIDOV, *A PURPOSIVE APPROACH TO LABOUR LAW* 125 (Paul Davies, Keith Ewing & Mark Freedland eds., 2016).

¹²⁰ DAVIDOV, *supra* note 119, at 125; Guy Davidov, *The Goals of Regulating Work: Between Universalism and Selectivity*, 64 U. TORONTO L.J. 1, 21–24 (2014).

¹²¹ DAVIDOV, *supra* note 119, at 124–25.

¹²² See Jane Friesen, *Overtime Pay Regulation and Weekly Hours of Work in Canada*, 8 LAB. ECON. 691 (2002) (“[O]vertime pay regulation may encourage temporary job creation or discourage lay-offs in response to short-run economic fluctuations, increasing average employment levels.”).

¹²³ Fair Labor Standards Act of 1938, 29 U.S.C. § 206(a)(1) (2018); see also Charles H. Livengood, Jr., *Compensable Working Time Under the Fair Labor Standards Act*, 30 N.C. L. REV. 113, 113–22 (1952).

¹²⁴ Donna Ballman, *States with Pro-Employee Laws: Work Breaks for Employees*, LEXISNEXIS (Oct. 23, 2014), <https://www.lexisnexis.com/LegalNewsRoom/labor-employment/b/labor-employment-top-blogs/posts/states-with-pro-employee-laws-work-breaks-for-employees>.

¹²⁵ Jennifer Clemons, *FLSA Retaliation: A Continuum of Employee Protection*, 53 BAYLOR L. REV. 535, 536–38 (2001).

¹²⁶ U.S. DEP'T LABOR, *FACT SHEET #23: THE OVERTIME PAY REQUIREMENTS OF THE FLSA* (Oct. 2019), <https://www.dol.gov/whd/regs/compliance/whdfs23.pdf>.

has always existed.¹²⁷ However, as shown below, in the digital reality employers are both more able and more likely to blur these boundaries.

1. *Working Time in the Digital Reality*

To understand how the digital reality modifies the basic idea of working time and its boundaries in today's world, we need to understand the impact of ICT on society and labor. As was explained earlier, ICT is the technological infrastructure that enables the access, transfer, use, and storage of information on the internet.¹²⁸ It plays a crucial role in the modern labor market.¹²⁹ It enables employees to easily receive information and transfer it to the workplace and to be available for work tasks outside the workplace at considerably lower financial costs.¹³⁰ Work is thus no longer bound to a single concrete place; it can be conducted from any place at any time.¹³¹ Consequently, the daily routine of many office employees has changed. In the past, employees went to a workplace located in a particular physical space (factory or office) and worked there on a fixed-shift schedule. Today, an increasing number of employees are working in diverse formats of what is defined as "telework" (or "ICT work" or "ICTM work" or "mobile work").¹³² Telework refers to "all types of technology-assisted work conducted outside of a centrally-located workspace."¹³³

As will be demonstrated below, ICT has made the psychological and physical boundaries between work and non-work difficult to construct.¹³⁴ It is an important

¹²⁷ There are many examples of employees, including lawyers, teachers, and reporters, who continued working at home, after their regular office hours, well before the digital reality.

¹²⁸ Murray, *supra* note 15.

¹²⁹ For further implications of ICT, see Miriam A. Cherry & Winifred R. Poster, *Crowdwork, Corporate Social Responsibility, and Fair Labor Practices*, in RESEARCH HANDBOOK ON DIGITAL TRANSFORMATIONS 291 (F. Xavier Olleros & Majlinda Zhegu eds., 2016); Dauschmidt, *supra* note 2, at 1594–98.

¹³⁰ Tracey Crosbie & Jeanne Moore, *Work-Life Balance and Working from Home*, 3 SOC. POL'Y & SOC'Y 223, 223–33 (2004); Richard B. Freeman, *The Labour Market in the New Information Economy*, 18 OXFORD REV. ECON. POL'Y 288 (2002). For more on remote work, see JON MESSENGER, OSCAR VARGAS LLAVE, LUTZ GSCHWIND, SIMON BOEHMER, GREET VERMEYLAN & MATHIJN WILKENS, EUROFOUND & INT'L LABOUR OFFICE, WORKING ANYTIME, ANYWHERE: THE EFFECTS ON THE WORLD OF WORK (2017), https://www.ilo.org/wcmsp5/groups/public/—dgreports/—dcomm/—publ/documents/publication/wcms_544138.pdf; JON MESSENGER, INT'L LABOUR ORG., WORKING TIME AND THE FUTURE OF WORK, (2018), https://www.ilo.org/wcmsp5/groups/public/—dgreports/cabinet/documents/publication/wcms_649907.pdf.

¹³¹ Graham & Anwar, *supra* note 113 (introduction).

¹³² MESSENGER ET AL., *supra* note 130, at 9.

¹³³ W.C. Bunting, *Unlocking the Housing-Related Benefits of Telework: A Case for Government Intervention*, 46 REAL EST. L.J. 285, 286 (2017).

¹³⁴ See Carrie A. Bulger, Russell A. Matthews & Mark E. Hoffman, *Work and Personal Life Boundary Management: Boundary Strength, Work/Personal Life Balance, and the Segmentation-Integration Continuum*, 12 J. OCCUPATIONAL HEALTH PSYCHOL. 365, 365–66 (2007).

component in the modern trend of working longer hours without always acknowledging all the extra time as working hours.¹³⁵ As will be detailed, ICT has enabled this in the concrete cases of contractual telework; home working and augmented reality (AR); and the new, widespread forms of non-formal telework.

2. *Formal Telework*

Teleworkers are employees who have a formal agreement with their employers that explicitly allows them to do some of their work outside the office at their preferred times.¹³⁶ Telework is usually associated with preferable schedule arrangements and with greater flexibility, autonomy, and freedom of movement for the employee.¹³⁷ It is also associated with greater efficiency for the employer.¹³⁸

Telework is a growing phenomenon around the world.¹³⁹ In 2016, 43% of American employees did some form of telework.¹⁴⁰ A 2019 survey by OWL Labs found that 62% of respondents conduct telework.¹⁴¹ Of those respondents, “54% . . . work remotely at least once per month, 48% work remotely at least once per week, and 30% work remotely full-time.”¹⁴² Studies indicate similar developments in other countries.¹⁴³ A unique, comprehensive EU study from 2017 stated that “[t]he incidence of T/ICTM varies substantially, ranging from 2% to 40% of all employees, depending on the particular country and the frequency with which employees carry out T/ICTM.”¹⁴⁴ The emergence of the COVID-19 pandemic has

¹³⁵ HUWS, *supra* note 1, at 76–77; WAJCMAN, *supra* note 16, at 87–110; C.W. & A.J.K.D., *Working Hours: Get a Life*, ECONOMIST (Sept. 24, 2013), <https://www.economist.com/free-exchange/2013/09/24/get-a-life>.

¹³⁶ See, e.g., Golden & Kim, *supra* note 60, at 129–30.

¹³⁷ GREGG, *supra* note 30, at 39–40. See generally EUROFOUND, WORK-LIFE BALANCE AND FLEXIBLE WORKING ARRANGEMENTS IN THE EUROPEAN UNION 5–7 (2017), https://www.eurofound.europa.eu/sites/default/files/ef_publication/field_ef_document/ef1741en.pdf; Moen et al., *supra* note 60 (suggesting that increasing employees’ control over where and when they do their work and providing greater support for family and personal life enhances employees’ well being).

¹³⁸ See sources cited *supra* note 137.

¹³⁹ MESSENGER ET AL., *supra* note 130, at 4.

¹⁴⁰ Niraj Chokshi, *Out of the Office: More People Are Working Remotely, Survey Finds*, N.Y. TIMES (Feb. 15, 2017), <https://www.nytimes.com/2017/02/15/us/remote-workers-work-from-home.html>.

¹⁴¹ OWL LABS, STATE OF REMOTE WORK 2019, at 5, <https://resources.owllabs.com/state-of-remote-work/2019>.

¹⁴² *Id.* at 6.

¹⁴³ See *New Forms of Employment*, EUROFOUND (Mar. 3, 2021), <https://www.eurofound.europa.eu/new-forms-of-employment>.

¹⁴⁴ MESSENGER ET AL., *supra* note 130, at 57.

accelerated the phenomenon of telework, and forced numerous workers to participate in the “largest global experiment in telecommuting in human history.”¹⁴⁵ According to a special Global Work-from-Home Experience Survey, “those who were working remotely before the pandemic, will increase their frequency after they are allowed to return to their offices. For those who were new to remote work until the pandemic, we believe there will be a significant upswing in their adoption.”¹⁴⁶

Teleworkers supposedly work the same number of hours at home as they would in the office. In practice, however, formal telework often “substitute[s] time from leisure to production.”¹⁴⁷ In the United States, telecommuting has a “strong relationship to long work hours,” so that almost 50% of telework “essentially [occurs] as overtime work.”¹⁴⁸ There are similar findings in other countries.¹⁴⁹ Studies revealed that across Europe, teleworkers “tend to work longer hours than average employees.”¹⁵⁰ A subsequent EU study explained that telework “leads to working beyond normal/contractual working hours, which often appears to be unpaid.”¹⁵¹ Many teleworkers tend to work “all the time” and must often be available to work for the whole day without any genuine ability to distinguish work and rest time.¹⁵² There are many possible reasons for this phenomenon. Increasing workloads and task complexity, fear of missing out (FOMO), and the need to please the employer who allowed them to work from home: all of these reasons compel teleworkers to work longer than they were originally expected to.¹⁵³

¹⁴⁵ Dimitris Papanikolaou & Lawrence D.W. Schmidt, *Working Remotely and the Supply-Side Impact of COVID-19*, at 4 (Nat’l Bureau of Econ. Research, Working Paper No. 27330, 2020), <https://www.nber.org/papers/w27330.pdf>.

¹⁴⁶ *Work-at-Home After Covid-19—Our Forecast*, GLOB. WORKPLACE ANALYTICS, <https://globalworkplaceanalytics.com/work-at-home-after-covid-19-our-forecast> (last visited July 29, 2021).

¹⁴⁷ Dau-Schmidt, *supra* note 3, at 69; *see also* David H. Autor, *Wiring the Labor Market*, 15 J. ECON. PERSP. 25, 28–29 (2001).

¹⁴⁸ Mary C. Noonan & Jennifer L. Glass, *The Hard Truth About Telecommuting*, BUREAU LAB. STAT., MONTHLY LAB. REV., June 2012, at 45, <https://www.bls.gov/opub/mlr/2012/06/art3full.pdf>.

¹⁴⁹ MESSENGER ET AL., *supra* note 130, at 21–23.

¹⁵⁰ *Id.*

¹⁵¹ *Id.* at 21.

¹⁵² *Id.* at 29.

¹⁵³ NICOLA STACEY, PETER ELLWOOD, SAM BRADBROOK, JOHN REYNOLDS & HUW WILLIAMS, EUROPEAN AGENCY FOR SAFETY AND HEALTH AT WORK, KEY TRENDS AND DRIVERS OF CHANGE IN INFORMATION AND COMMUNICATION TECHNOLOGIES AND WORK LOCATION 15 (2017), <https://osha.europa.eu/en/tools-and-publications/publications/key-trends-and-drivers-change-information-and-communication>.

Clearly, the traditional boundaries between work and leisure and between working time units and rest time units are becoming flexible in the case of contractual teleworkers. As the following Parts suggest, this phenomenon is even more pronounced among “full” teleworkers and in non-formal forms of telework.

3. *(Tele)working Only from Home and Augmented Reality*

At the periphery of contractual telework, some teleworkers work only from home, either never going to any formal workplace or doing so only rarely. In recent years, we have witnessed an increase in the number of these “full” teleworkers, both as highly paid “knowledge workers” and in low-paying jobs, mainly in the sales and service sectors.¹⁵⁴ The phenomenon of teleworkers who work *only* from home seems to be in its initial stage. However, the COVID-19 pandemic created the opportunity for full teleworking for many employees around the world.¹⁵⁵ This, along with technological capabilities and apparent cost savings, may lead the office workplace through a revolution in which many employees will work only from home.¹⁵⁶

One possible way to speed up this revolution is by the promotion of augmented reality (AR) technology in the workplace.¹⁵⁷ Augmented reality technology can create a workplace that combines real and imaginary objects and that can be shared by the different actors who use it. Employees can comfortably sit in their own homes while operating in the workplace through a robot with a TV camera and screen.¹⁵⁸

¹⁵⁴ PENNY GURSTEIN, WIRED TO THE WORLD, CHAINED TO THE HOME: TELEWORK IN DAILY LIFE 80 (2001); Lynette Harris, *Home-Based Teleworking and the Employment Relationship: Managerial Challenges and Dilemmas*, 32 PERSONNEL REV. 422 (2003); Susan R. Madsen, *The Effects of Home-Based Teleworking on Work-Family Conflict*, 14 HUM. RESOURCE DEV. Q. 35 (2003); Susanne Tietze & Gill Musson, *The Times and Temporalities of Home-Based Telework*, 32 PERSONNEL REV. 438, 447–50 (2003).

¹⁵⁵ Erik Brynjolfsson, John J. Horton, Adam Ozimek, Daniel Rock, Garima Sharma & Hong-Yi TuYe, *COVID-19 and Remote Work: An Early Look at US Data* 24 (Nat'l Bureau of Econ. Research, Working Paper No. 27344, 2020), https://www.nber.org/system/files/working_papers/w27344/w27344.pdf; Courtney Rubin, *The Office Is Dead*, MARKER (May 10, 2020), <https://marker.medium.com/the-office-is-dead-16be89f25d01>.

¹⁵⁶ HUWS, *supra* note 6, at 87–89; WORK FOUND., PRODUCTIVITY, TECHNOLOGY & WORKING ANYWHERE (Jan. 2018), <https://www.lancaster.ac.uk/work-foundation/publications/productivity-technology-working-anywhere> (follow link to report at bottom of page); Ross Marowitz, *More Employees Working from Home in Shift to ‘Telecommuting,’* TORONTO STAR (May 23, 2016), <https://www.thestar.com/business/2016/05/23/more-employees-working-from-home-in-shift-to-telecommuting.html>.

¹⁵⁷ See Hirsch, *supra* note 11, at 901 (defining X Reality (XR) as a term for altered reality environments including “virtual reality (VR) and augmented reality (AR) as the two most prominent forms of XR, although they are not the only ones.”).

¹⁵⁸ See, for instance, the diary of such an employee in Emily Dreyfuss, *My Life as a Robot*, WIRED (Sept. 8, 2015, 7:00 AM), <https://www.wired.com/2015/09/my-life-as-a-robot-double-robotics-telecommuting-longread/>.

Other forms of virtual reality (VR) enable workers to work from different geographic locations and time zones without sharing a physical workplace.¹⁵⁹ In this context, Jeffrey Hirsch argues that in the future, many types of work will barely have any geographic and time-zone boundaries, and many of them will be based solely on workers' individual VR rigs.¹⁶⁰ However, for the time being, working from home using AR or VR technology still seems to be a distant scenario.¹⁶¹

It is not surprising that the blurriness of working time units and leisure time units is more apparent for employees who work only from home by one technological means or another. A study of home-based professional managers from different sectors demonstrated that they struggle with long days of both work and home tasks.¹⁶² Another study, focusing on home-based sales teleworkers working in the United Kingdom for a multinational corporation, found that 56% of them "allowed customers to contact them 24 hours a day and at weekends."¹⁶³ Thus, employees who work only from home based on ICT (or, in the future, AR/VR technology) will likely find it even more challenging to distinguish between work and leisure.

4. *Sporadic Working Hours and Being Constantly Online for Work*

Finally, along with formal forms of telework, over the years ICT has generated new forms of remote work for many employees who are not considered teleworkers. These employees, who are supposedly required to work a concrete shift in the workplace, find themselves also working at home in their leisure time.¹⁶⁴ Because of smart devices such as cell phones and tablets, which can be used for both work and entertainment,¹⁶⁵ the notion of telework has changed and many "regular" employees tend to continue working at home. This sort of "new" telework is much less organized.¹⁶⁶ It is mostly reflected by employees' tendency to occasionally check emails on their

¹⁵⁹ See Hirsch, *supra* note 11, at 924.

¹⁶⁰ *Id.* at 949–50.

¹⁶¹ *Id.* at 902, 949.

¹⁶² Tietze & Musson, *supra* note 154, at 447–50.

¹⁶³ Harris, *supra* note 154, at 430.

¹⁶⁴ Jon C. Messenger & Lutz Gschwind, *Three Generations of Telework: New ICTs and the (R)evolution from Home Office to Virtual Office*, 31 NEW TECH., WORK AND EMP. 195, 202–05 (2016) (citing Gregor Maier, Fabian Schneider & Anja Feldmann, *A First Look at Mobile Hand-Held Device Traffic*, in PASSIVE AND ACTIVE MEASUREMENT, LECTURE NOTES IN COMPUTER SCIENCE 161 (Arvind Krishnamurthy & Bernhard Plattner eds., 2010) (discussing smartphone usage in Europe in 2008 and 2009, noting peak traffic first thing in the morning as users check email to begin their days)).

¹⁶⁵ JACOB SILVERMAN, TERMS OF SERVICE: SOCIAL MEDIA AND THE PRICE OF CONSTANT CONNECTION 336 (2015).

¹⁶⁶ Messenger & Gschwind, *supra* note 164, at 199–200; see also Judy Wajcman, Michael Bittman & Judith E. Brown, *Families Without Borders: Mobile Phones, Connectedness and Work-Home Divisions*, 42 SOC. 635 (2008).

cell phones during their supposed leisure time.¹⁶⁷ It is also evident in employees receiving work-related texts or WhatsApp messages and responding to them in the evening or on weekends and taking work-related phone calls outside the office.¹⁶⁸ This has been described as the “third generation of telework,” which refers to the extension of the ability to conduct telework.¹⁶⁹ Émilie Genin defines this change in telework as time-porosity, which refers to “contemporary forms of interference between working time and personal time.”¹⁷⁰

Perhaps more than formal telework, ad hoc telework has crucial implications on employees’ work-life balance. However, since it involves numerous sporadic moments, calculating or estimating their total number or frequency is extremely difficult. An international study from 2012 showed that employees who use smartphones tend to work around thirteen and a half hours per day and another five hours on weekends.¹⁷¹ A French study from 2016 revealed that “more than a third of French workers used their devices to do work out-of-hours every day.”¹⁷² A study by the Pew Research Center from July 2018 illustrated an extreme scenario of constant connectivity and availability to work online in the United States.¹⁷³

Ad hoc, informal work during leisure time is common both for employees in senior positions¹⁷⁴ and among junior employees.¹⁷⁵ It has become a reality for workers in occupations that are not considered classic office work.¹⁷⁶ This is because

¹⁶⁷ GREGG, *supra* note 30, at 14, 15, 47, 58–62; Messenger & Gschwind, *supra* note 164, at 202.

¹⁶⁸ See *supra* sources cited note 167.

¹⁶⁹ Messenger & Gschwind, *supra* note 164, at 202–04 (defining the ability to conduct work from home as the “first generation of telework,” the ability to conduct work everywhere by using mobile devices as the “second generation of telework,” and the phenomenon of being able to work in “intermediate spaces” between the office and the home as the “third generation of telework”).

¹⁷⁰ Genin, *supra* note 113, at 281.

¹⁷¹ JENNIFER J. DEAL, CTR. FOR CREATIVE LEADERSHIP, ALWAYS ON, NEVER DONE?: DON’T BLAME THE SMARTPHONE 2–3 (2015), <http://www.ccl.org/wp-content/uploads/2015/04/AlwaysOn.pdf>.

¹⁷² Agence France-Presse, *French Workers Win Legal Right to Avoid Checking Work Email Out-of-Hours*, GUARDIAN (Dec. 31, 2016, 12:10 AM), <https://www.theguardian.com/money/2016/dec/31/french-workers-win-legal-right-to-avoid-checking-work-email-out-of-hours>.

¹⁷³ Janna Anderson & Lee Rainie, *Stories from Experts About the Impact of Digital Life: The Negatives of Digital Life*, PEW RES. CTR. (July 3, 2018), <http://www.pewinternet.org/2018/07/03/the-negatives-of-digital-life/>.

¹⁷⁴ See, e.g., Linda Duxbury, Ian Towers, Christopher Higgins & John Ajit Thomas, *From 9 to 5 to 24/7: How Technology has Redefined the Workday*, in INFORMATION RESOURCES MANAGEMENT: GLOBAL CHALLENGES 305 (Wai K. Law ed., 2007); Noelle Chesley, *Blurring Boundaries? Linking Technology Use, Spillover, Individual Distress, and Family Satisfaction*, 67 J. MARRIAGE & FAM. 1237 (2005).

¹⁷⁵ GREGG, *supra* note 30, at 56–69.

¹⁷⁶ WAJCMAN, *supra* note 16, at 92–93.

many non-office positions also use computers and cell phones as an integral part of the daily work routine. Because of the new technological possibilities for doing so, implicit demands of employers, and the new culture and habits of the modern workplace, people in various positions feel the urge to work at all times of the day, almost everywhere.¹⁷⁷ Even doctors, teachers, and many other employees whose core work involves constant engagement in human interactions with clients are also expected to occasionally check work-related emails or WhatsApp messages from home, and to constantly be available online or over the phone for work purposes.¹⁷⁸

This informal telework demonstrates well how the digital reality blurs the classic distinctions between working time and leisure time for all.¹⁷⁹ In addition, and just as with the privacy example, in both formal and informal forms of telework there are other forces that contribute. Employers—the main economic beneficiaries of this phenomenon—signal to their workers, sometimes even explicitly, that they demand and reward constant availability.¹⁸⁰ The assumption in many workplaces is that a professional employee is always available and responsive online.¹⁸¹ Moreover, our current capitalist culture encourages this sort of connectivity: be constantly connected to giant high-tech companies' services—such as Facebook, WhatsApp, and Gmail, which benefit from this connectivity—so you won't miss anything.¹⁸² FOMO has become a modern disease and is an integral part of everyday life, including in the workplace context.¹⁸³ These economic and cultural tendencies, along with the technological capabilities of ICT, led to the flexibility of working time and leisure time boundaries.

In the following Part, I will show how big tech companies, in the context of platform-based work, have used technology in a way that similarly blurs the distinctions between employees and independent contractors.

¹⁷⁷ See generally GREGG, *supra* note 30 (examining the urge to work at all times of the day from a feminist perspective).

¹⁷⁸ See HUWS, *supra* note 6, at 164–65; WAJCMAN, *supra* note 16, at 95–97.

¹⁷⁹ VALSAMIS ET AL., *supra* note 49, at 26–27.

¹⁸⁰ See, e.g., Jodi Kantor & David Streitfeld, *Inside Amazon: Wrestling Big Ideas in a Bruising Workplace*, N.Y. TIMES (Aug. 15, 2015), <https://www.nytimes.com/2015/08/16/technology/inside-amazon-wrestling-big-ideas-in-a-bruising-workplace.html>.

¹⁸¹ See, e.g., *id.*

¹⁸² This is the main idea of Zuboff, *supra* note 6, particularly at 63–128, 233–93, 329–51.

¹⁸³ Andrew Przybylski, Kou Murayama, Cody R. DeHaan & Valerie Gladwell, *Motivational, Emotional, and Behavioral Correlates of Fear of Missing Out*, 29 COMPUTERS HUM. BEHAV. 1841 (2013) (studying how FOMO changes the way young adults interact with social media).

C. *The Contract: The Employment Contract Between the Employer and the Employee*

1. *Who Is Under the Employment Contract?: Old Question, New Forms*

The distinction between an employee and an independent contractor has always been of concern to the law.¹⁸⁴ According to the Fair Labor Standards Act (FLSA), an employee is “any individual employed by an employer.”¹⁸⁵ Due to this ambiguous definition, the interpretation of “employee” has evolved in courts, leading to the establishment of the “economic realities test.”¹⁸⁶ This test lists a number of factors that bear on the determination of whether a person is an employee or an independent contractor, which mainly turns on whether the individual is controlled by the employer.¹⁸⁷ The question of who is an employee is a crucial preliminary question in labor law because only employees enjoy the full coverage and protection of labor law. The rights to earn a minimum wage, to enjoy resting hours, and to unionize are reserved to employees.¹⁸⁸

The modern world has complicated the distinctions between an employee and an independent contractor independent of the internet.¹⁸⁹ For instance, subcontracting companies, outsourcing, and using temporary workers for conducting specific tasks have altogether challenged the legal status of some traditional employees.¹⁹⁰ In parallel, the concept of a clear, binary distinction between employees and independent contractors has been questioned in the past few decades. This has led to the emergence of more flexible and in-between categories in several places outside

¹⁸⁴ See, e.g., Kenneth G. Dau-Schmidt, *The Problem of ‘Misclassification’ or How to Define Who is an ‘Employee’ Under Protective Legislation in the Information Age*, in THE CAMBRIDGE HANDBOOK OF U.S. LABOR LAW FOR THE TWENTY-FIRST CENTURY 140, 140–53 (Richard Bales & Charlotte Garden eds., 2020). For comprehensive comparative research on this matter, see generally Guy Davidov, Mark Freedland & Nicola Kountouris, *The Subjects of Labor Law: “Employees” and Other Workers*, in RESEARCH HANDBOOK IN COMPARATIVE LABOUR LAW 115 (Matthew Finkin & Guy Mundlak eds., 2015).

¹⁸⁵ Fair Labor Standards Act of 1938, 29 U.S.C. § 203(e) (2018).

¹⁸⁶ See, e.g., Keith Cunningham-Parmeter, *From Amazon to Uber: Defining Employment in the Modern Economy*, 96 B.U. L. REV. 1673 (2016); Henry Ross, *Ridesharing’s House of Cards: O’Connor v. Uber Technologies, Inc. and the Viability of Uber’s Labor Model in Washington*, 90 WASH. L. REV. 1431 (2015).

¹⁸⁷ Cunningham-Parmeter, *supra* note 186, at 1692; Ross, *supra* note 186, at 1459.

¹⁸⁸ Cunningham-Parmeter, *supra* note 186, at 1683–84, 1727; Ross, *supra* note 186, at 1434, 1441. Note that in many other countries there is an additional intermediate category of “worker.” See *infra* notes 321–29 and accompanying text.

¹⁸⁹ See generally DAVID WEIL, THE FISSURED WORKPLACE: WHY WORK BECAME SO BAD FOR SO MANY AND WHAT CAN BE DONE TO IMPROVE IT (2014); Hirsch, *supra* note 11, at 924; Rogers, *supra* note 11, at 24–38.

¹⁹⁰ WEIL, *supra* note 189, at 4; De Stefano, *supra* note 12, at 480–82.

the United States, such as the “worker” category, which affords these workers some of the protection of labor rights.¹⁹¹

The digital reality has brought with it the growth of flexible and atypical forms of employment, and it has further blurred the distinctions between employees and independent contractors.¹⁹² Consequently, the standard employment relationship has been reshaped in today’s world, and various people who were perceived and treated as employees in the past can now be more easily transformed into independent contractors who are outside the scope of labor law protection.¹⁹³ The phenomenon of platform-based work is the most common and explored example to clarify this argument.

2. Platform-Based Work

Platform-based work refers to various new forms of work that are distinct outcomes of the digital reality.¹⁹⁴ Many differences exist among these new forms of work. Some of them are conducted entirely remotely via the internet,¹⁹⁵ such as crowdsourcing.¹⁹⁶ Other forms of platform-based work are only ordered online and usually have to be conducted by a specific person in a specific location and time.¹⁹⁷ These forms of work are typically described as the “sharing economy,” the “gig economy,” or “work-on-demand via app.”¹⁹⁸ Even though many differences exist among the various types of platform-based work, from a broader perspective, what they have in common is that a technological collaborative platform temporarily connects

¹⁹¹ See *infra* notes 321–29 and accompanying text.

¹⁹² Hirsch, *supra* note 11, at 924; Jeffrey M. Hirsch & Joseph A. Seiner, *A Modern Union for the Modern Economy*, 86 FORDHAM L. REV. 1727, 1739–45 (2018); Means & Seiner, *supra* note 12, at 1524–35; Rogers, *supra* note 11, at 24–38; Benjamin Sachs, *Uber: Employee Status and “Flexibility,”* ONLABOR (Sept. 25, 2015), <https://onlabor.org/uber-employee-status-and-flexibility/>; Benjamin Sachs, *Uber, Flexibility and Employee Status*, ONLABOR (May. 18, 2018), <https://onlabor.org/uber-flexibility-and-employee-status/>.

¹⁹³ See sources cited *supra* note 192.

¹⁹⁴ See sources cited *supra* note 12.

¹⁹⁵ For further elaboration, see FLORIAN A. SCHMIDT, FRIEDRICH-EBERT-STIFTUNG, DIGITAL LABOUR MARKETS IN THE PLATFORM ECONOMY: MAPPING THE POLITICAL CHALLENGES OF CROWD WORK AND GIG WORK 5 (2017), <https://library.fes.de/pdf-files/wiso/13164.pdf>.

¹⁹⁶ See generally Cherry, *(Virtually) Minimum Wage*, *supra* note 12, at 1093; Felstiner, *supra* note 12; Jeff Howe, *The Rise of Crowdsourcing*, WIRED (Jan. 6, 2006, 12:00 PM), <https://www.wired.com/2006/06/crowds/>.

¹⁹⁷ SCHMIDT, *supra* note 195, at 5.

¹⁹⁸ Means & Seiner, *supra* note 12 at 1513, *passim* (defining it as the “on-demand economy”); De Stefano, *supra* note 12, at 471. For other definitions, see Lobel, *supra* note 12, at 88–89, 96–99, 104; VALERIO DE STEFANO & ANTONIO ALOISI, EUROPEAN COMM’N, EUROPEAN LEGAL FRAMEWORK FOR “DIGITAL LABOUR PLATFORMS” 6–12 (2018), https://publications.jrc.ec.europa.eu/repository/bitstream/JRC112243/jrc112243_legal_framework_digital_labour_platforms_final.pdf.

the worker and the person who needs the service.¹⁹⁹ In other words, platform-based work has three elements: the service provider/worker, the customer/user, and the online platform that connects them.²⁰⁰

Platform-based work is rapidly growing around the world.²⁰¹ And yet, accurately estimating the number of platform-based workers is difficult.²⁰² Various studies in the United States attempt to pinpoint the number of platform-based workers on the basis of proxies such as engagement in general alternative work arrangements²⁰³ and tax returns,²⁰⁴ or by using general surveys.²⁰⁵ These studies conclude that platform-based workers are between 8% and 15% of the general work force in the United States.²⁰⁶ However, as the Bureau of Labor Statistics admitted in 2019, obtaining specific numbers on the exact scope of platform-based workers is still difficult.²⁰⁷ This is mainly because of the various definitions of platform-based workers and their differing scope of working hours.²⁰⁸ In any event, the phenomenon of platform-based work is significant and expanding.²⁰⁹

¹⁹⁹ JEREMIAS PRASSL, EUROPEAN TRADE UNION COMM'N, COLLECTIVE VOICE IN THE PLATFORM ECONOMY: CHALLENGES, OPPORTUNITIES, SOLUTIONS 6–7 (Sep. 2018), <https://www.etuc.org/sites/default/files/publication/file/2018-09/Prassl%20report%20maquette.pdf>.

²⁰⁰ PRASSL, *supra* note 199, at 6–7 (citing *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: A European Agenda for the Collaborative Economy*, at 3, COM (2016) 356 final (June 2, 2016)); Orly Lobel, *Regulating the Sharing Economy: Self-Governance, Efficiency & Values*, CHINA GLOBAL L. REV. (forthcoming) (manuscript at 2).

²⁰¹ GRAY & SURI, *supra* note 8, at 169; PRASSL, *supra* note 199, at 8. For platform-based work's global characteristics, see WINIFRED R. POSTER, MULTI-SURVEILLANCES TRANSNATIONAL DIGITAL AGENCIES IN THE OUTSOURCED SERVICES OF INDIAN CALL CENTERS (forthcoming) (manuscript 230–31).

²⁰² GRAY & SURI, *supra* note 8, at 169.

²⁰³ Lawrence F. Katz & Alan B. Krueger, *The Rise and Nature of Alternative Work Arrangements in the United States, 1995–2015*, at 2–3 (Nat'l Bureau of Econ. Research, Working Paper No. 22667, 2016), <http://www.nber.org/papers/w22667>.

²⁰⁴ Brett Collins, Andrew Garin, Emilie Jackson, Dmitri Koustas & Mark Payne, *Is Gig Work Replacing Traditional Employment? Evidence from Two Decades of Tax Returns* (Mar. 25, 2019) (working paper) (on file with IRS SOI Joint Statistical Research Program), <https://www.irs.gov/pub/irs-soi/19rpgigworkreplacingtraditionalemployment.pdf>.

²⁰⁵ Aaron Smith, *Gig Work, Online Selling and Home Sharing*, PEW RES. CTR. (Nov. 17, 2016), <https://www.pewresearch.org/internet/2016/11/17/gig-work-online-selling-and-home-sharing/>.

²⁰⁶ See *supra* notes 203–05.

²⁰⁷ Elisabeth Buchwald, *The Government Has No Idea How Many Gig Workers There Are, and That's a Problem*, MARKET WATCH (Jan. 7, 2019, 3:51 PM), <https://www.marketwatch.com/story/the-government-has-no-idea-how-many-gig-workers-there-areheres-why-thats-a-problem-2018-07-18/>.

²⁰⁸ See *supra* text accompanying notes 201–07.

²⁰⁹ See *supra* text accompanying notes 201–07.

Next, I explain how the technological infrastructure of the platform disturbs the traditional employment contract in both the crowdsourcing and sharing economy models.

a. Crowdsourcing Work

Crowdsourcing refers to work conducted online by an undefined group of people.²¹⁰ It can be separated into numerous small tasks that may last a few seconds—such as coding and tagging—that each person in the “crowd” does independently.²¹¹ Crowdsourcing can also involve an open call to perform a complex online task, with only the best-performing group being paid at the end.²¹²

Crowdsourcing work is characterized by greater flexibility. This is because a platform enables a company or programmer (“the client”) to choose whether to use it at all and, if it does, how many workers to have in a specific moment to do a certain online task.²¹³ At the same time, the platform enables an “amorphous collection of individuals”²¹⁴ to choose which task to do and their work schedule.²¹⁵ Thus, the basic idea of crowd work is that no binding commitment exists between the parties regarding work supply. Neither the platform company nor the clients are obligated to provide work to anyone.²¹⁶ Likewise, the potential online workers are not obligated to perform a task.²¹⁷

Crowdsourcing work disturbs the basics of the traditional employment contract because no one is compelled to conduct work during concrete working hours.²¹⁸ However, as Valerio De Stefano clarifies, “rejection of a work by a client in a platform may determine a dramatic loss in one’s ranking, which would prevent

²¹⁰ See *supra* note 196.

²¹¹ JEFF HOWE, CROWDSOURCING: WHY THE POWER OF THE CROWD IS DRIVING THE FUTURE OF BUSINESS 49 (2008); De Stefano, *supra* note 12, at 474.

²¹² SCHMIDT, *supra* note 195, at 5.

²¹³ Felstiner, *supra* note 12, at 154.

²¹⁴ *Id.* at 145.

²¹⁵ Juliet Schor, *Debating the Sharing Economy*, GREAT TRANSITION INITIATIVE: TOWARD A TRANSFORMATIVE VISION AND PRAXIS, Oct. 2014, https://www.tellus.org/pub/Schor_Debating_the_Sharing_Economy.pdf. In her writing, Schor exemplifies the complexity of the sharing economy and its positive and problematic implications for workers.

²¹⁶ Cherry, *Beyond Misclassification*, *supra* note 12, at 598–601; Jeremias Prassl & Martin Risak, *Uber, Taskrabbit & Co: Platforms as Employers? Rethinking the Legal Analysis of Crowdwork*, 37 COMP. LAB. L. & POL’Y J. 619, 625–27 (2016).

²¹⁷ Cherry, *Beyond Misclassification*, *supra* note 12, at 582; Prassl & Risak, *supra* note 216, at 626.

²¹⁸ Cf. *supra* notes 114–115 and accompanying text (describing how the traditional employment contract developed working hours as a tool for employers to compel employee productivity during the workday).

acceding to the most remunerable jobs reserved only to those workers with the highest rates.”²¹⁹ The fact that the client or the platform determines the exact duration of or deadline for each task also diminishes the flexibility and autonomy afforded the worker.²²⁰ The platform is used not only to connect the parties but also to automatically discipline and control workers without defining this connection as an employment relationship.²²¹

When work is divided into numerous small tasks lasting as little as a minute or two and distributed to numerous workers from all around the world, defining these minor tasks as part of a distinct employment relationship is difficult.²²² There might be a lasting connection between the same company and the same worker, who conducts the same task for several months, but the platform breaks down this continual connection into numerous minor assignments. In this way, the platform unlinks the worker and the client, and disturbs the traditional model of employment.

Amazon Mechanical Turk (MTurk), “one of the most famous and used crowdwork platforms,” exemplifies these points well.²²³ MTurk offers a virtual marketplace in which clients can ask workers from around the world to perform data-processing tasks around the clock that algorithms are unable to conduct.²²⁴ Lilly Irani explains that “[e]mployers seeking quick-turnaround data processing no longer had to hire more employees or even contract with an outsourcing firm They could simply place their data-processing tasks online.”²²⁵ At the end of the process, the client can choose whether or not to pay for the work based on whether they are satisfied, and regardless of whether the work is used.²²⁶ This whole process takes place in MTurk with an explicit obliteration of the employment contract. MTurk’s participation agreement explicitly states that the workers are independent contractors and not employees.²²⁷ The participation agreement also enables companies to avoid labor law responsibilities, including the most basic obligation—to pay for work.²²⁸

²¹⁹ De Stefano, *supra* note 12, at 492.

²²⁰ *Id.*; GRAY & SURI, *supra* note 8, at 77–79.

²²¹ *Id.*

²²² Felstiner, *supra* note 12, at 146; Prassl & Risak, *supra* note 216, at 630. Compare with the Taylorism model in Cherry, *Beyond Misclassification*, *supra* note 12, at 595–96 and GRAY & SURI, *supra* note 8, at 40–64.

²²³ De Stefano, *supra* note 12, at 476–77; *see also* GRAY & SURI, *supra* note 8, at ix–xiii.

²²⁴ Felstiner, *supra* note 12, at 161; Lilly Irani, *Difference and Dependence Among Digital Workers: The Case of Amazon Mechanical Turk*, 114:1 S. ATLANTIC Q. (SPECIAL ISSUE) 225, 225 (2015).

²²⁵ Irani, *supra* note 224, at 225.

²²⁶ *Id.* at 227; GRAY & SURI, *supra* note 8, at 85–91.

²²⁷ *See Participation Agreement*, AMAZON MECHANICAL TURK, <https://www.mturk.com/participation-agreement> (last updated Mar. 25, 2020).

²²⁸ *See supra* notes 212, 226 and accompanying text.

The legal literature is replete with the question of whether crowd workers are independent contractors or employees, and much ambiguity exists in this regard.²²⁹ Moreover, it is not clear who should be the employer in this triangle—the client who asked for the specific task or the platform company.²³⁰

b. The Sharing Economy Model

The sharing economy model refers to people who offer goods and services, such as home cleaning or taxi rides, via smartphone applications or special websites.²³¹ As with the crowdsourcing model, flexibility underlies the sharing economy model.²³² The workers can enjoy a flexible time schedule.²³³ However, here as well, the platform is used to disturb the basic legal relationship and obligations between the worker, the platform, and the clients.²³⁴ Platform companies usually define their workers as independent contractors, and the contract between them and their workers as “mere licenses to use the app.”²³⁵

Uber, “the most important test case for the gig economy,” demonstrates this point well.²³⁶ On its official website, Uber defines its drivers as “partners” and states that “on demand” transportation technology is its “core service.”²³⁷ Generating a fluid connection between Uber and its drivers is possible mainly because of the platform. Since the platform can be connected to hundreds of potential drivers and hundreds of potential clients, it can easily match a requested ride and its concrete timeline with a driver who can provide that ride. Each Uber driver can choose whether to work and, if so, when and for how long.²³⁸ This flexibility makes working as an Uber driver appealing to many people around the world.²³⁹ These terms of work lead the work agreement to be perceived as an agreement to provide a concrete service, with the service provider choosing whether and how many rides to provide per day, and not as a classic employment agreement, in which the employee

²²⁹ De Stefano, *supra* note 12, at 489–94.

²³⁰ Felstiner, *supra* note 12, at 146; Prassl & Risak, *supra* note 216, at 630, 632.

²³¹ Rogers, *supra* note 11, at 29–30.

²³² For the complex implications of this concept, see Schor, *supra* note 215.

²³³ *Id.*; Gali Racabi, *Despite the Binary: Looking for Power Outside the Employee Status*, TUL. L. REV. (forthcoming 2021) (manuscript at 24–30).

²³⁴ De Stefano, *supra* note 12, at 476–78.

²³⁵ Alan Bogg & Michael Ford, *Between Statute and Contract: Who is a Worker?* 135 L.Q. REV. 347, 347–48; see also Estlund, *supra* note 11, at 283–85.

²³⁶ Alexis C. Madrigal, *3 Million Uber Drivers Are About to Get a New Boss*, ATLANTIC (Apr. 10, 2018), <https://www.theatlantic.com/technology/archive/2018/04/uber-driver-app-revamp/557117/>.

²³⁷ Lobel, *supra* note 200 (manuscript at 9–10); *How to Use the Uber App*, UBER, <https://www.uber.com/us/en/about/how-does-uber-work/> (last visited July 29, 2021).

²³⁸ See *Opportunity Is Everywhere*, UBER, <https://www.uber.com/il/en/drive/> (last visited July 29, 2021).

²³⁹ Hall & Krueger, *supra* note 60, at 714; Schor, *supra* note 215.

normally *has to* work for a concrete number of hours every day.²⁴⁰ In a similar manner, this flexibility generates various bilateral contractual relationships with numerous clients.²⁴¹ These numerous clients create a triangle that detaches the distinct connection between Uber and the workers and, again, makes it difficult to acknowledge an explicit employee-employer relationship.²⁴²

However, just as with crowdsourcing, the flexibility is more apparent than real. This is because the algorithms at the core of the platform company are used not only to match clients with workers but also to discipline the platform's workforce without any explicit evidence or employment agreement.²⁴³ In most cases,²⁴⁴ the platform company monitors and controls the driver's exact route, which clients she will have, and how much money she will earn.²⁴⁵ All of this is done without defining the relationship between the company and the driver in any binding way. Therefore, throughout the world, courts and legal scholars are occupied with the questions of whether workers in the Uber model are employees or not, and what rights they have.²⁴⁶ With this model, we witness again how the platform is used to disturb the

²⁴⁰ SETH D. HARRIS & ALAN B. KRUEGER, HAMILTON PROJECT, A PROPOSAL FOR MODERNIZING LABOR LAWS FOR TWENTY-FIRST CENTURY WORK: THE "INDEPENDENT WORKER" 9–10 (Dec. 2015), https://www.hamiltonproject.org/assets/files/modernizing_labor_laws_for_twenty_first_century_work_krueger_harris.pdfpdf2015; De Stefano, *supra* note 12, at 479.

²⁴¹ Kavi Gupta, *Will Labor Unions Survive in the Era of Automation?*, FORBES (Oct. 12, 2016, 6:00 AM), <https://www.forbes.com/sites/kavigupta/2016/10/12/will-labor-unions-survive-in-the-era-of-automation/#1080d5b93b22>.

²⁴² See, e.g., POLICY IMPLICATIONS OF VIRTUAL WORK, *supra* note 5; see also Prassl & Risak, *supra* note 216, at 634.

²⁴³ Rogers, *supra* note 11, at 36 ("Advanced monitoring efforts can therefore give firms the best of both worlds: the powers traditionally associated with employment, without the duties and costs.").

²⁴⁴ Note that in California, Assembly Bill 5 (AB5) came into force in August 2019 and clarified that Uber's and Lyft's drivers should be considered employees, mainly because of the control Uber and Lyft have over the drivers' routes and salaries. In response, Uber considered developing a new model by which drivers will be able to see their estimated fares and decline trips based on the information they are provided. See Faiz Siddiqui, *Uber's Secret Project to Bolster Its Case Against AB5, California's Gig-Worker Law*, WASH. POST (Jan. 6, 2020, 6:00 AM), <https://www.washingtonpost.com/technology/2020/01/06/ubers-secret-project-bolster-its-case-against-ab-californias-gig-worker-law/>. In November 2020, California voters passed Proposition 22, which curbed the impact of AB5. Proposition 22 was the "most expensive ballot initiative in California's history." Miriam A. Cherry, *Dispatch No. 31—United States: Proposition 22: A Vote on Gig Worker Status in California*, COMP. LAB. L. & POL'Y J.: DISPATCHES, Feb. 2021, at 1, 8; Kate Conger, *Uber and Lyft Drivers in California Will Remain Contractors*, N.Y. TIMES (Nov. 7, 2020), <https://www.nytimes.com/2020/11/04/technology/california-uber-lyft-prop-22.html>.

²⁴⁵ Alex Rosenblat, *The Truth About How Uber's App Manages Drivers*, HARV. BUS. REV. (Apr. 6, 2016), <https://hbr.org/2016/04/the-truth-about-how-ubers-app-manages-drivers>.

²⁴⁶ See, e.g., Cherry, *Beyond Misclassification*, *supra* note 12, at 578; Estlund, *supra* note 11,

nature of the employment contract and enables the platform to avoid labor law responsibilities.

Platform-based work seems to be different from other forms of work because everyone seems to benefit from the flexibility that the digital age enables: the worker has the flexibility to choose whether and when to work and the platform company and the clients enjoy a flexible workforce without any binding obligations. However, as I tried to show in this Part, platform-based work is more complex than it seems at a first glance. Ultimately, the workers cannot really enjoy full flexibility and the platform companies are the primary beneficiaries.²⁴⁷ That is exactly why the latter puts a lot of effort into preserving the current flexible work agreement, even at the price of expensive settlements and endless legal processes.²⁴⁸ Platform-based work is an interesting case study demonstrating how companies use and manipulate technology to facilitate flexibility to achieve profits²⁴⁹ and how legal actors have a crucial role in the struggle against this flexible scenario.²⁵⁰

In the following and final case, I shed light on the way the internet challenges another type of relationship in labor: relationships between employees and, particularly, the idea of a community of employees.

D. Community: The Collapse of the Traditional Connections Between Employees

To this point, I have demonstrated how digital technology has been used by certain actors to challenge and blur the distinctions between employees' private and public professional spheres and between their working time and leisure time and between employees and independent contractors. All these phenomena have also influenced the internal relationships within the workers' community and made them more liquid and fragile than in the past. This fragility of workers' community

at 284–86; Naomi B. Sunshine, *Employees as Price-Takers*, 22 LEWIS & CLARK L. REV. 105, 114–15 (2018). For a comparative perspective, see Ignasi Beltran de Heredia Ruiz, *Employment Status of Platform Workers*, UNA MIRADA CRÍTICA A LAS RELACIONES LABORALES (Dec. 9, 2018), <https://ignasibeltran.com/2018/12/09/employment-status-of-platform-workers-national-courts-decisions-overview-australia-brazil-chile-france-italy-united-kingdom-united-states-spain/>.

²⁴⁷ See *supra* notes 219–20, 243–45 and accompanying text.

²⁴⁸ See, e.g., *supra* note 244; Heather Somerville, *Uber to Pay \$20 Million to Settle Long-Running Legal Battle with Drivers*, REUTERS (Mar. 12, 2019), <https://www.reuters.com/article/us-uber-classaction/uber-to-pay-20-million-to-settle-long-running-legal-battle-with-drivers-idUSKBN1QT27Z>. For further information on the legal processes, see *supra* notes 229, 246.

²⁴⁹ Cf. *supra* notes 28–30 (describing how technology itself is merely a tool and the antagonistic class relationship can define how it is manipulated to promote and sustain a capitalist model).

²⁵⁰ Cf. Kapczynski, *supra* note 7, at 1497–99 (book review) (describing another scenario in which the law plays a crucial role in sustaining capitalist ideals: information capitalists gaining power from immaterial property rights).

is part of a wider process of destruction of the collective identity and greater individualization that various communities have been affected by in the digital age. As Bauman describes it, it is another part of the “liquid modernity,” in which society has become more focused on the individual and less organized around communities.²⁵¹

This may seem surprising. Basic to electronic networks is that they connect individuals and, seemingly, enable group communication.²⁵² However, as tech-sociologist Langdon Winner explained in 1997, we are living in an era of “cyberlibertarianism,” in which society is experiencing a radical individualization process.²⁵³ According to Winner, the internet seemingly enabled more online connections; however, it did so without any formal obligations to a concrete community’s membership.²⁵⁴ Psychological research conducted in the late 1990s and early 2000s based on quantitative surveys suggested that, despite its ability to easily connect people, the internet eventually led to more isolation of individuals, often because of the weakness of the alternative online connections.²⁵⁵ Similarly, scholars show how the workforce is being individualized in the digital reality and losing its crucial collective power, particularly with regard to traditional trade unions.²⁵⁶

To be sure, all around the world, including in the United States, union membership has been declining,²⁵⁷ and there are probably many reasons for this phenomena other than the internet.²⁵⁸ However, against the concrete background of

²⁵¹ BAUMAN, *supra* note 6, at 148–54.

²⁵² CASTELLS, *supra* note 38, at 48–51, 73, 120.

²⁵³ Langdon Winner, *Cyberlibertarian Myths and the Prospects for Community*, 27 ACM SIGCAS COMPUTERS & SOC’Y 14, 14–15 (1997).

²⁵⁴ *Id.* at 17.

²⁵⁵ See generally Robert Kraut, Michael Patterson, Vicki Lundmark, Sara Kiesler, Tridas Mukophadhyay & William Scherlis, *Internet Paradox: A Social Technology That Reduces Social Involvement and Psychological Well-Being?*, 53 AM. PSYCHOLOGIST 1017 (1998); Norman H. Nie & Lutz Erbring, *Internet and Society: A Preliminary Report*, 1 IT & SOC’Y 275, 277–79, 280 (2002). But see Jean-Francois Coget, Yutaka Yamauchi & Michael Suman, *The Internet, Social Networks and Loneliness*, 1 IT & SOC’Y 180, 190–93 (2002) (finding that “Internet use is slightly associated with a decreased level of loneliness”).

²⁵⁶ CASTELLS, *supra* note 2, at 475; Alex Wood, *Three Lessons the Labour Movement Must Learn from the Fight for 15 at Walmart*, SHEFFIELD POL. ECON. RES. INST., (June 8, 2018), <http://speri.dept.shef.ac.uk/2018/06/08/three-lessons-the-labour-movement-must-learn-from-the-fight-for-15-at-walmart/>.

²⁵⁷ For an overview, see Alex Bryson, Richard Freeman, Rafael Gomez & Paul Willman, *The Twin Track Model of Employee Voice: An Anglo-American Perspective on Union Decline and the Rise of Alternative Forms of Voice*, in EMPLOYEE VOICE AT WORK 23, 23–24 (2019); Dan Kopf, *Union Membership in the US Keeps on Falling, Like Almost Everywhere Else*, QUARTZ (Feb. 5, 2019), <https://qz.com/1542019/union-membership-in-the-us-keeps-on-falling-like-almost-everywhere-else/>.

²⁵⁸ See, e.g., Dwyer Gunn, *What Caused the Decline of Unions in America?* PAC. STANDARD

the digital reality, new forms of work are growing in importance.²⁵⁹ In the following Sections I will concentrate on three such reasons: the phenomenon of telework, platform-based work, and the growing use of robots and AI in the workplace.

1. *Telework and Workers' Community*

As was demonstrated earlier, the digital reality has enabled people to work from a distance in various forms of telework. Obviously, the fact that people do not share a physical space in which to conduct work prevents them from meeting one another regularly. And it has closed them off from sharing their common difficulties and interests at work when they occasionally meet one another in shared spaces.²⁶⁰ In this way, ICT has disrupted the basic bonds between employees in the workplace.²⁶¹ This detachment is to the detriment of workers' solidarity and may sabotage their ability to create a solid trade union. Scholars describe the essential basics of the traditional trade union and its need to be built on familiarity, solidarity, and trust among the workers.²⁶² These are usually developed in informal face-to-face daily communications, such as the office's break room or any other shared space in which workers can meet regularly.²⁶³

Nevertheless, although ICT has challenged the traditional connection between workers, it has at the same time enabled new online forms of communication, such as the workplace's official platforms or general social media sites. These alternative forums could, it would seem, be the basis for an employees' community and enable employees' organization. However, there are many difficulties with this concept. First, employees do not have a right to use their workplace's official sites, which are

(Apr. 24, 2018), <https://psmag.com/economics/what-caused-the-decline-of-unions-in-america>.

²⁵⁹ See ORG. FOR ECON. CO-OPERATION & DEV., OECD EMPLOYMENT OUTLOOK 2017, at 128 (2017); Antonio Aloisi, *Negotiating the Digital Transformation of Work: Non-Standard Workers' Voice, Collective Rights and Mobilisation Practices in the Platform Economy* (European Univ. Inst. Working Paper No. MWP 2019/03, 2019).

²⁶⁰ See, e.g., PAUL MARGINSON, TRADE UNIONS AND MULTINATIONAL COMPANIES: A MULTI-LEVEL CHALLENGE (Jan. 2016), http://www2.warwick.ac.uk/fac/soc/wbs/research/irru/wp/irru_wp_103.pdf; Martin H. Malin & Henry H. Perritt, Jr., *The National Labor Relations Act in Cyberspace: Union Organizing in Electronic Workplaces*, 49 U. KAN. L. REV. 1, 20–21, 32–33 (2000).

²⁶¹ CASTELLS, *supra* note 2, at 301–02.

²⁶² Gemma Newlands, Cristoph Lutz & Christian Fieseler, *Collective Action and Provider Classification in the Sharing Economy*, 33 NEW TECH., WORK AND EMP. 250, 253 (2018); Claus Offe & Helmut Wessenthal, *Two Logics of Collective Action: Theoretical Notes on Social Class and Organizational Form*, 1 POL. POWER & SOC. THEORY 67, 76–79 (1980); Brishen Rogers, *Social Media and Worker Organizing Under U.S. Law*, 35 INT'L J. COMP. LAB. L. & INDUS. REL. 127, 141–43 (2019).

²⁶³ Malin & Perritt, *supra* note 260, at 20.

the employers' property, for purposes of unionization.²⁶⁴ Moreover, whether employees wish to use these official sites is questionable, taking into consideration the fact that they are usually controlled by and accessible to the supervisory eye of the employer.²⁶⁵ As for general sites, such as Facebook or WhatsApp groups, they can be easily accessible to the employer, even if in a lesser degree, since they are usually open to numerous people who can forward information to employers.²⁶⁶ Additionally, creating connection and recruiting employees through these sites can violate a workplace's social media policy or be considered as harming the workplace's reputation.²⁶⁷

Most importantly, online forums can indeed be useful as adjuncts to traditional connections and face-to-face meetings between employees. However, if they become the only channels for connection, they tend to be less effective. When teleworkers work only occasionally from a distance, it seems reasonable that they will have personal face-to-face connections. However, for "full" teleworkers who work only from a distance or platform-based workers who are inherently isolated from one another, it may be that online forums are the only way to sustain communication with each other. This may jeopardize the workers' group identity and community. I refer to this last point at length in the following Section, which focuses on platform-based workers.

2. *Platform-Based Workers and Workers' Community*

Platform-based work blurs the basics of labor in many ways. Along with its influence on the employment contract, platform-based work has the potential to disrupt the connections between the various workers on the same platform and their ability to create a sustainable workers' community, much less a formal trade union.²⁶⁸

There are several reasons for this. As mentioned earlier, the basic relationship between a worker and a platform is more flexible than that seen in a traditional

²⁶⁴ See, for example, the decision of the National Labor Relations Board (NLRB) from Dec. 16, 2019, which overruled a decision that protected employees' ability to use the workplace's mailing list to engage in discussion regarding unionization. *Caesars Entm't*, 368 N.L.R.B. No. 143 (Dec. 16, 2019); see also Benjamin Sachs, *Privileging Property in the NLRB Email Case*, ONLABOR (Dec. 19, 2019), <https://onlabor.org/privileging-property-in-the-nlr-email-case/>. For further elaboration, see Jeffrey M. Hirsch, *Worker Collective Action in the Digital Age*, 117 W. VA. L. REV. 921 (2015).

²⁶⁵ See Hirsch, *supra* note 264, at 923.

²⁶⁶ *Id.* at 936, 957–58.

²⁶⁷ See generally Louise Thornthwaite, *Chilling Times: Social Media Policies, Labour Law and Employment Relations*, 54 ASIA PAC. J. HUM. RESOURCES 332 (2016).

²⁶⁸ This is because a formal trade union is required to follow many formal obligations. For further elaboration, see Benjamin Sachs, *The Uber/Lyft "Workers' Association" Debate*, ONLABOR (June 19, 2019), <https://onlabor.org/the-uber-lyft-workers-association-debate/>.

employment relationship, and it raises questions regarding the legal status of a platform-based worker. The preliminary legal obstacle to formal unionization of workers is proving that they are employees (not independent contractors) who have a right to unionize in accordance with the National Labor Relations Act (NLRA).²⁶⁹ Moreover, even if the workers can overcome the obstacle of their legal status to generate and join a formal trade union, another question arises regarding the scope and terms of the union's relevant bargaining unit.²⁷⁰ Among other things, the bargaining unit must be based on workers' similarities in occupation, skills, and duties.²⁷¹ However, the flexibility inherent in platform-based work has occasionally made identifying these similarities challenging.²⁷² For instance, it is questionable what the exact bargaining unit is in a diverse platform company, such as MTurk or TaskRabbit, which combine workers with different professions and from different geographic areas.²⁷³

Finally, even if workers wish to create a community that is not a formal trade union, they may encounter many obstacles stemming from the essence of the platform. Platform-based work, almost by definition, physically isolates workers from one another, as each person is usually meant to work separately for a different client, in a different location, and at different times.²⁷⁴ As a result, and just as with the case of full telework, the required basis for collective action is lacking—workers find it challenging to meet regularly, to share their common difficulties, and to unite.²⁷⁵ The ease with which a platform company can employ new workers, sometimes even from around the world, generates competition and isolation, and significantly hinders the formation of a collective identity.²⁷⁶ In short, platform-based work fragments workers' collective identity and sabotages collective action, especially action based on solidarity and trust.

²⁶⁹ Labor Management Relations Act, 29 U.S.C. § 157 (2018); see also STONE, *supra* note 4, at 214; Sunshine, *supra* note 246, at 115.

²⁷⁰ For further elaboration on bargaining units and the difficulty of having one, see Brishen Rogers, *Libertarian Corporatism is Not an Oxymoron*, 94 TEX. L. REV. 1623, 1627–31 (2016).

²⁷¹ Malin & Perritt, *supra* note 260, at 23–26.

²⁷² Katherine V. Stone, *Unions in the Precarious Economy: How Collective Bargaining Can Help Gig and On-Demand Workers*, AM. PROSPECT (Feb. 21, 2017), <https://prospect.org/article/unions-precarius-economy>.

²⁷³ See AMAZON MECHANICAL TURK, <https://www.mturk.com/> (last visited July 29, 2021); TaskRabbit, <https://www.taskrabbit.com/> (last visited July 29, 2021).

²⁷⁴ GRAY & SURI, *supra* note 8, at 121–23; Graham & Anwar, *supra* note 113; Irani, *supra* note 224, at 225–26; Newlands et al., *supra* note 262, at 253.

²⁷⁵ Matthew W. Finkin, *Beclouded Work, Beclouded Workers in Historical Perspective*, 37 COMP. LAB. L. & POL'Y J. 603, 615 (2016); Offe & Wiesenthal, *supra* note 262, 75–79.

²⁷⁶ Mark Graham, Isis Hjorth & Vili Lehdonvirta, *Digital Labour and Development: Impacts of Global Digital Labour Platforms and the Gig Economy on Worker Livelihoods*, 23 TRANSFER: EUR. REV. LAB. & RES. 135, 155 (2017).

a. *Is There Any Online Alternative?*

At this point, some may justifiably argue that along with all these obstacles to workers' collective identity and organization, digital technology enables platform-based workers to connect by using numerous alternative forms of communication.²⁷⁷ And indeed, all around the world platform-based workers use social media sites to share their difficulties, communicate information that is relevant to their work, and support and advise one another.²⁷⁸ Social media sites can also be a tool for generating collective action and recruiting more workers to join.²⁷⁹ In this way, for instance, during the COVID-19 pandemic, platform-based workers used social media sites to collectively stand for their rights.²⁸⁰

Alternative forms of communication can seemingly enable a new sort of workers' community based on a virtual infrastructure. However, it is questionable whether these online forums can serve as the sole basis for a stable and solid organization of platform-based workers. There are several reasons for this.

First, social media sites tend to be highly chaotic and they usually do not follow any clear or consistent pattern of organization.²⁸¹ Often they are "structured around forums and segmented by platform, worker nationality, worker seniority, and type of task."²⁸² Similarly, social media activity lacks the basic structure of solid organizations, such as creating "local chapters, developing leaders, and establishing decision-making and accountability structures."²⁸³ This leads to difficulties regarding

²⁷⁷ GRAY & SURI, *supra* note 8, at 124–38; HANNAH JOHNSTON & CHRIS LAND-KAZLAUSKAS, INT'L LABOUR OFFICE, ORGANIZING ON-DEMAND: REPRESENTATION, VOICE, AND COLLECTIVE BARGAINING IN THE GIG ECONOMY 6–7, 18–19 (2018), https://www.ilo.org/wcmsp5/groups/public/ed_protect/protrav/travail/documents/publication/wcms_624286.pdf; Aloisi, *supra* note 259, at 21–24; Bryson et al., *supra* note 257, at 44; Hirsch & Seiner, *supra* note 192, at 1739–57; POSTER, *supra* note 201 (manuscript at 185–87) (showing how crowd workers in India are not interested in formal unionization).

²⁷⁸ POSTER, *supra* note 201 (manuscript at 185–187); Alex J. Wood, Vili Lehdonvirta & Mark Graham, *Workers of the Internet Unite? Online Freelancer Organisation Among Remote Gig Economy Workers in Six Asian and African Countries* 33 NEW TECH., WORK & EMP. 95, 97, 100–01 (2018); Mary L. Gray, Siddharth Suri, Syed Shoab Ali & Deepti Kulkarni, *The Crowd Is a Collaborative Network* (Feb. 2016), https://www.researchgate.net/publication/311488768_The_Crowd_is_a_Collaborative_Network.

²⁷⁹ Newlands et al., *supra* note 262, at 252–53.

²⁸⁰ See, e.g., Courtney Brunson & Jon Levitan, *The Instacart Strike and Worker Power Amid the Pandemic*, ONLABOR (Mar. 31, 2020), <https://onlabor.org/the-instacart-strike-and-worker-power-amid-the-pandemic/>.

²⁸¹ JOHNSTON & LAND-KAZLAUSKAS, *supra* note 277, at 6–7, 18–19.

²⁸² Wood et al., *supra* note 278, at 98.

²⁸³ Rogers, *supra* note 262, at 148; ZEYNEP TUFEKCI, TWITTER AND TEAR GAS: THE POWER AND FRAGILITY OF NETWORKED PROTEST, at xiii–xvi (2017).

the decision and execution process of collective actions.²⁸⁴ Several competing attempts might be made to represent workers on the same platform. For instance, Uber's New York drivers can join several different initiatives, such as the rideshare advocacy group Ride Share Drivers United,²⁸⁵ the Independent Drivers Guild, also known as Uber's Guild,²⁸⁶ and the New York Taxi Workers Alliance.²⁸⁷ These different organizations, operating in relation to the same platforms, might have contradicting goals or pull in different directions.²⁸⁸

Additionally, and as was clarified earlier in the case of teleworkers, while social media sites are a powerful tool for connecting platform-based workers, research demonstrates that, in practice, social media sites do not really "unite the workers of the world."²⁸⁹ Just as Winner argued in 1997 regarding "cyberlibertarianism," the internet generates many simultaneous connections, yet they seem to be less meaningful and binding than traditional offline links.²⁹⁰ In the context of labor, Brishen Rogers demonstrated how social media activity leads workers to believe that they are gaining substantial power to organize mass activities. However, in practice, this virtual activity is quite weak, since it lacks the necessary infrastructure for unionization.²⁹¹ Other scholars have found that online communities are at risk of failure, particularly when the economic or political risks are high, since they lack genuine trust and commitment, which are difficult to generate online.²⁹² This is perhaps

²⁸⁴ GEERT LOVINK & NED ROSSITER, ORGANIZATION AFTER SOCIAL MEDIA 120–22 (2018), <http://www.minorcompositions.info/wpcontent/uploads/2018/06/organizationaftersocialmedia-web.pdf>.

²⁸⁵ See *Mission Statement*, RIDESHARE DRIVERS UNITED, <http://ridesharedriversunited.com/mission-statement/> (last visited July 29, 2021).

²⁸⁶ Hirsch & Seiner, *supra* note 192, at 1749; cf. Ruth Berins Collier, V.B. Dubal & Christopher Carter, *Labor Platforms and Gig Work: The Failure to Regulate* 15–17 (Inst. Res. on Lab. & Emp., Working Paper No. 106–17, 2017), <http://irle.berkeley.edu/files/2017/Labor-Platforms-and-Gig-Work.pdf>.

²⁸⁷ Although Uber drivers are included, NYTWA's primary purpose is to represent taxi drivers. See Berins et al., *supra* note 286, at 18.

²⁸⁸ *Id.* at 15–17.

²⁸⁹ Alex Wood, *Variable Geographies of Protest Among Online Gig Workers*, THE ILABOUR PROJECT (Feb. 13, 2017), <http://ilabour.oii.ox.ac.uk/variable-geographies-of-protest-among-online-gig-workers/>.

²⁹⁰ See *supra* notes 253–55 and accompanying text.

²⁹¹ Rogers, *supra* note 262, at 148–49 (referring to the writings of Zeynep Tufekci, see TUFEKCI, *supra* note 283, at xiii–xvi).

²⁹² Compare the political discourse in Lincoln Dahlberg, *Computer-Mediated Communication and the Public Sphere: A Critical Analysis*, J. COMPUTER-MEDIATED COMM. (Oct. 1, 2001), <https://academic.oup.com/jcmc/article/7/1/JCMC714/4584246> (see section entitled "Sincerity").

why many offline activities of platform-based workers, such as strikes or demonstrations, which demand more involvement than simply signing an online petition, ultimately attract only small numbers of participants.²⁹³

Platform-based work is another example of workers' collective identity and activity being fragmented as a result of their foundation on the internet.²⁹⁴ In the last example that follows, I demonstrate how the next generation of the workforce—featuring the use of robots and AI—will contribute to the fragmentation of the workplace.

3. *Robots, AI, and Workers' Community*

Human beings and machines have worked side by side for a long time. The Fordist and Taylorism models in the industrial era were based on the idea that humans and machines co-work to manage small tasks that together result in the creation of one complete product.²⁹⁵ In a similar manner, the emergence of office work led to a workplace in which each employee works separately in front of a machine: the computer.²⁹⁶ Even then, this may have contributed to the isolation of workers from one another and to the fragility of a workers' community. However, previous generations of employees were working with machines but were also surrounded by human colleagues, while in today's world, employees may find themselves working mainly with robots or algorithms without encountering a human face for most of their working time. Since the exact mix of the future human-robot-AI workforce is still obscure, it is difficult to predict the scope and outcomes of this phenomenon.²⁹⁷ However, given its potentially far-reaching implications for workers' community, I will provide brief details about some interesting cases of work alongside a robot or AI program and describe their potential implications for a workers' community.

Amazon's warehouse may be the ultimate example of the workplace of the future, in which workers may find themselves working mainly with robots.²⁹⁸ In his article on Amazon's warehouse in Denver, Matt Simon described how human employees and robots are working side by side to prepare products for delivery.²⁹⁹ Robots move around the warehouse to help employees find the required products for delivery, and the human employees "assist" the robots with tasks that require more

²⁹³ Berins et al., *supra* note 286, at 15–17.

²⁹⁴ For further elaboration on this point, in the UK context, see Tammy Katsabian, *Collective Action in the Digital Reality: The Case of Platform-Based Workers*, MOD. L. REV., May 2021, at 1.

²⁹⁵ See, e.g., GRAY & SURI, *supra* note 8, at 40–43; STONE, *supra* note 4, at 32–46.

²⁹⁶ GRAY & SURI, *supra* note 8, at 52–57.

²⁹⁷ See, e.g., Hirsch, *supra* note 11, at 917 (“If there was one common theme throughout my interviews with technology experts, it was an unwillingness to predict the development of technology with any certainty, especially anything beyond a short timeline.”).

²⁹⁸ Matt Simon, *Inside the Amazon Warehouse Where Humans and Machines Become One*, WIRED (June 5, 2019, 12:00 PM), <https://www.wired.com/story/amazon-warehouse-robots/>.

²⁹⁹ *Id.*

complicated motor or reasoning skills. Based on this, Simon concludes that “[h]umans and robots are fusing into a cohesive workforce.”³⁰⁰ Amazon’s model is not unique in this regard; other warehouses are also beginning to move toward robotics and to integrate humans and robots in ongoing tasks.³⁰¹ Moreover, since there is consensus among researchers that robots are about to become an integral part of the future workplace,³⁰² it is likely that in other workplaces, human employees will increasingly find themselves working mostly with robots.

The entrance of AI into the workplace³⁰³ may also lead to more isolation of workers from one another. Many tasks in workplaces today are being distributed so that they fall partly under the responsibility of an AI program and partly under that of a human employee.³⁰⁴ For instance, employees and algorithms work “together” to support customer services; to improve the process of decision-making in the company; to map, code, and tag pictures; and to develop other technological programs.³⁰⁵ All of these phenomena are already taking place in numerous workplaces around the world and indicate that employees may increasingly find themselves

³⁰⁰ *Id.*; see also Ellie Silverman, *How Humans and Robots Work Side-by-Side in Amazon Fulfillment Centers*, PHYSORG (June 19, 2019), <https://phys.org/news/2019-06-humans-robots-side-by-side-amazon-fulfillment.html>.

³⁰¹ Simon, *supra* note 298. For other formats of co-work between robots and humans, see António B. Moniz & Bettina-Johanna Krings, *Robots Working with Humans or Humans Working with Robots? Searching for Social Dimensions in New Human-Robot Interaction in Industry*, 6 SOC’YS, August 16, 2016, at 1; Ellen Fort, *Robots Are Making \$6 Burgers in San Francisco*, EATER SAN FRANCISCO (June 21, 2018, 2:10 PM), <https://sf.eater.com/2018/6/21/17489084/creator-robot-burgers-san-francisco>; Allison Sauppé & Bilge Mutlu, *The Social Impact of a Robot Co-Worker in Industrial Settings*, in CHI 2015: PROCEEDINGS OF THE 33RD ANNUAL CHI CONFERENCE ON HUMAN FACTORS IN COMPUTING SYSTEMS 3613 (2015).

³⁰² See, e.g., MCKINSEY GLOBAL INST., *A FUTURE THAT WORKS: AUTOMATION, EMPLOYMENT AND PRODUCTIVITY* 29–52 (Jan. 2017), <https://www.mckinsey.com/featured-insights/digital-disruption/harnessing-automation-for-a-future-that-works> (follow link for “Full Report”); ORG. FOR ECON. CO-OPERATION & DEV., *OECD EMPLOYMENT OUTLOOK: THE FUTURE OF WORK* 13–14 (2019), <https://www.oecd.org/employment/employment-outlook-2019-highlight-en.pdf>; WORLD BANK GRP., *THE CHANGING NATURE OF WORK* 17–34 (2019), <http://documents.worldbank.org/curated/en/816281518818814423/pdf/2019-WDR-Report.pdf#page=27>; Estlund, *supra* note 11; Hirsch, *supra* note 11, at 920, 945; Rogers, *supra* note 11, at 3.

³⁰³ Bodie et al., *supra* note 10, at 964–65; Cherry, *Beyond Misclassification*, *supra* note 12, at 596–97; De Stefano, *supra* note 10, at 7–8.

³⁰⁴ See, e.g., PAUL R. DAUGHERTY & H. JAMES WILSON, *HUMAN + MACHINE: REIMAGINING WORK IN THE AGE OF AI* 1–16, 85–101 (2018); Mohammad Hossein Jarrahi, *Artificial Intelligence and the Future of Work: Human-AI Symbiosis in Organizational Decision Making*, 61 BUS. HORIZONS 577 (2018).

³⁰⁵ DAUGHERTY & WILSON, *supra* note 304, at 1–16, 85–101.

working to accomplish the work of an algorithm without having any meaningful human interaction with their colleagues.³⁰⁶

Therefore, it seems reasonable to assume that more of this type of automation may sabotage generation of a workers' community.³⁰⁷ Since this phenomenon is still in its initial stage, there is little, if any, research on the potential implications for workers' collective action. However, based on research on platform-based workers' communities, the following is clear: ongoing face-to-face meetings and conversations are crucial to create and sustain workers' collective identity and solidarity.³⁰⁸ When employees are working separately—each one with a robot or with AI—it seems reasonable to conclude that there will be implications for employees' community.

Finally, and perhaps unlike the previous cases regarding the fragmentation of the traditional employees' community, it seems that the involvement of employers is sometimes indirect. By this, I mean that the outcome of a more individualized workplace might be desirable to the employer; however, it can be only a side effect of another desirable goal. For example, in the case of teleworkers, the employer encourages employees to work more, including in their leisure time; however, it is not at all clear whether the employer intentionally wishes to individualize the workplace. Disturbing the establishment of trade unions may be a preferable outcome for many employers in the United States,³⁰⁹ but it is difficult to argue that this is their main goal in enabling formal teleworking in the workplace. In contrast, in the case of more automation of the workplace (and all the more so in the case of platform-based work), it seems that fragmentation of the workplace is a direct outcome that employers intentionally generate and sustain.³¹⁰ Perhaps exactly due to the explicit intentions of the employer to disturb the workers' community, in these cases, we are likely to also witness resistance by workers and explicit efforts to unionize.³¹¹

³⁰⁶ *Id.*; cf. GRAY & SURI, *supra* note 8, at 32, 41.

³⁰⁷ NICK DYER-WITHEFORD, CYBER PROLETARIAT: GLOBAL LABOUR IN THE DIGITAL VORTEX 38 (2015); Vili Lehdonvirta, *Algorithms that Divide and Unite: Delocalisation, Identity and Collective Action in 'Microwork,'* in SPACE, PLACE AND GLOBAL DIGITAL WORK 53, 63–67, 72–73 (Jörg Flecker ed., 2016).

³⁰⁸ See *supra* notes 289–93 and accompanying text.

³⁰⁹ *E.g.*, CELINE MCNICHOLAS, MARGARET POYDOCK, JULIA WOLFE, BEN ZIPPERER, GORDON LAFER & LOLA LOUSTAUNAU, ECON. POL'Y INST., UNLAWFUL (Dec. 11, 2019), <https://files.epi.org/pdf/179315.pdf>.

³¹⁰ See, e.g., Katie Schoolov, *How Amazon Is Fighting Back Against Workers' Increasing Efforts to Unionize*, CNBC (Aug. 22, 2019, 1:34 PM), <https://www.cnbc.com/2019/08/22/how-amazon-is-fighting-back-against-workers-efforts-to-unionize.html>; see also *supra* note 244 (describing Uber's struggle against AB5 bill in California).

³¹¹ See *supra* notes 277–80, 310 and accompanying text.

In the following and final Part, I conclude and ask how all of these phenomena of greater flexibility of basic concepts in the labor field should influence the question of regulation in the digital reality. I will offer three initial directions for regulation.

III. THE QUESTION OF REGULATION

We have seen how technology enables different actors, particularly employers and tech companies, to disrupt and blur many basic legal categories in the labor field. It enables the blurring of distinctions between the public/professional sphere of the employee and her private sphere; enables the blurring of distinctions between working time and leisure time; disrupts the basics of the employment contract; and challenges the basics of workers' community. However, technology does not have to go in this direction of blurring and disturbing the basic protections that labor rights provide.³¹² As I wish to demonstrate in this final Part, in order to change this state of things, both the law and technology can and should be adjusted to the challenges at hand.

The essence of this Article exposes the major trends the labor field has undergone in the digital reality. This required much elaboration. Discussion of possible solutions also requires space—more space than is available here. Nevertheless, in the rest of this Article, I offer three possible initial directions for genuine protection of labor rights in the digital reality. The first two refer to legal orders.³¹³ From a bird's-eye view, it was demonstrated throughout this Article that the digital reality enables more flexibility of legal orders and rules. Therefore, a solution must take into account this constant flexibility and contain elements that directly deal with it. I suggest two possible solutions: embracing flexibility and viewing it as a meaningful part of the legal categories, and adding an additional procedural layer of protections to the labor rights at stake that is less sensitive to the rapid changes that labor law is undergoing. Additionally, based on the understanding that technology is not deterministic and can be developed and used in ways other than it currently is,³¹⁴ I also suggest a third regulatory direction that focuses on using technology as part of the solution.

³¹² See *supra* note 7 and accompanying text.

³¹³ See, e.g., LESSIG, *supra* note 7, at 31–37; Hirsch, *supra* note 11, at 958; Kapczynski, *supra* note 9, at 859–60; Rogers, *supra* note 9, at 533–34.

³¹⁴ See, e.g., Michael Bar-Sinai, Michal Tadjer & Mor Vilozni, *Computer Assisted Access to Justice via Formal Jurisprudence Modeling* (Nov. 5, 2019), <https://arxiv.org/abs/1910.13518v2> (describing a model for an internet-based self-assessment system designed to promote labor rights). See generally Molly Cohen & Arun Sundararajan, *Self-Regulation and Innovation in the Peer-to-Peer Sharing Economy*, 82 U CHI. L. REV. DIALOGUE 116, 132 (2015); Maayan Perel (Filmar) & Niva Elkin-Koren, *Black Box Tinkering: Beyond Disclosure in Algorithmic Enforcement*, 69 FLA. L. REV. 181 (2017).

A. *Embracing Flexibility*

Law plays a powerful role in determining whether and how technology will influence human rights and legal categories.³¹⁵ Thus, in order to deal with the blurriness of labor laws' categories and rights, the law itself must first and foremost respond to the challenges at hand. To handle the flexibility trend that *disturbs* the protection of basic labor rights and categories, the law should be modified to use flexibility as a tool *to ensure the protection* of labor rights. In other words, flexibility should not be merely an obstacle to the implementation of certain rights; rather, it can also be an interpretive tool to apply and protect these same rights.³¹⁶

The most well-known example of this understanding is the contextual approach to the concept of privacy, which was developed, mostly at the philosophical level, against the concrete background of the digital reality. As was demonstrated earlier, due to cultural tendencies and the manipulative use of technology by employers, the distinctions between the private sphere and the public sphere of employees become fragile and blurred in the digital reality. As a response, new models of privacy were developed that embraced the flexible, blurry nature of the concept of privacy and interpreted it as more contextual in its essence.³¹⁷ In this regard, Helen Nissenbaum offered the well-known "contextual integrity" approach.³¹⁸ The contextual integrity approach interprets the question of privacy within the specific context in which information is published, in accordance with the general norms and specific expectations and conventions that surround the publication, even if the information is supposedly published "publicly" online.³¹⁹ A flexible concept of privacy has become common among many other privacy scholars around the world.³²⁰ They read and understand privacy in a flexible manner, which enables it to be more

³¹⁵ See *supra* note 9 and accompanying text.

³¹⁶ Compare to the new model of regulations of AI technologies in the United States from 2020, which suggest flexibility as an interpretive tool of regulation, discussed in Jory Heckman, *White House Releases 'First of Its Kind' Set of Binding AI Principles for Agency Regulators*, FED. NEWS NETWORK (Jan. 7, 2020), <https://federalnewsnetwork.com/artificial-intelligence/2020/01/white-house-releases-first-of-its-kind-set-of-binding-ai-principles-for-agency-regulators/>.

³¹⁷ See, e.g., Austin, *supra* note 69, at 119–21; Goldie, *supra* note 63, at 142 (discussing "expressive privacy," the social aspect of privacy).

³¹⁸ See Helen Nissenbaum, *Privacy as Contextual Integrity*, 79 WASH. L. REV. 119, 136–37 (2004) [hereinafter Nissenbaum, *Privacy as Contextual Integrity*]; see also HELEN NISSENBAUM, *PRIVACY IN CONTEXT: TECHNOLOGY, POLICY, AND THE INTEGRITY OF SOCIAL LIFE* 233–35 (2010).

³¹⁹ Nissenbaum, *Privacy as Contextual Integrity*, *supra* note 318, at 137–38, 143.

³²⁰ See, e.g., Jeroen van den Hoven, *Information Technology, Privacy, and the Protection of Personal Data*, in *INFORMATION TECHNOLOGY AND MORAL PHILOSOPHY* 301 (Jeroen van den Hoven & John Weckert eds., 2008); Julie Cohen, *What Privacy Is For*, 126 HARV. L. REV. 1904, 1907–08 (2013); Solove, *supra* note 63, at 1126–29, 1146; Shaun B. Spencer, *Reasonable Expectations and the Erosion of Privacy*, 39 SAN DIEGO L. REV. 843, 844 (2002).

easily adjusted to the many new scenarios of privacy violation in the digital reality, even in the paradoxical cases in which the private information seemingly became public.

Similarly, legal scholars call for the adoption of a more flexible restating of the basic distinction between employees and independent contractors in a non-binary way so that an additional intermediate category will exist and enable more workers to enjoy some labor rights.³²¹ These efforts seem to be specifically needed in the digital reality. As was elaborated in detail above, the digital reality—particularly the emergence of platform-based work—has problematized the question of who is an employee and who is an independent contractor. Following this, scholars have called for the development of intermediate and more flexible categories that can enable some platform-based workers to enjoy some labor rights, even if they do not have all the characteristics of traditional employees.³²²

In this regard, Seth Harris and Alan Krueger explained how “[n]ew and emerging work relationships arising in the ‘online gig economy’ do not fit the existing legal definitions of ‘employee’ and ‘independent contractor’ status.”³²³ Therefore, they suggested using a new, intermediate category of worker—the “independent worker”—who is characterized by working with an intermediate company that connects her to relevant clients.³²⁴ This independent worker has some of the characteristics of a traditional employee and some of the characteristics of an independent contractor.³²⁵ She should therefore enjoy at least some of the protections afforded by labor rights.³²⁶ Miriam Cherry and Antonio Aloisi also explored the possibility of generating an intermediate category of a worker in the gig economy in the United States, given the unique and hybrid characteristics of gig workers that prevent them from enjoying the protection of labor rights.³²⁷ Based on the experience of other countries, they demonstrated the advantages and disadvantages of such a flexible

³²¹ See *supra* note 191 and accompanying text.

³²² See, e.g., Cherry, (*Virtually*) *Minimum Wage*, *supra* note 12, at 1105; Rogers, *supra* note 12, at 480, 519–20; Sunshine, *supra* note 246, at 134–40; Elizabeth Kennedy, Comment, *Freedom from Independence: Collective Bargaining Rights for “Dependent Contractors,”* 26 BERKELEY J. EMP. & LAB. L. 143, 147–48 (2005); see also Chris Opfer & Keshia Clukey, *New York Said to Become Next Battleground for Gig Worker Law*, BLOOMBERG LAW: DAILY LABOR REPORT (Oct. 9, 2019, 7:28 AM), <https://news.bloomberglaw.com/daily-labor-report/new-york-said-to-become-next-battleground-for-gig-worker-law> (discussing New York’s recent suggestion to have a new intermediate category of “dependent workers” to enable platform-based workers some basic rights).

³²³ HARRIS & KRUEGER, *supra* note 240, at 5.

³²⁴ *Id.* at 9.

³²⁵ *Id.* at 9–10.

³²⁶ *Id.* at 15–22.

³²⁷ See generally Miriam A. Cherry & Antonio Aloisi, “*Dependent Contractors*” in the Gig Economy: A Comparative Approach, 66 AM. U. L. REV. 635 (2017).

hybrid category.³²⁸ They concluded that such a category can be helpful in some circumstances that are unique to gig work; however, it should be used carefully.³²⁹

As the “privacy” and “worker” cases demonstrate, the digital reality’s flexibility can become an interpretive tool of basic categories to ensure the protection of labor rights. Thus, other legal categories that have become more flexible today—such as working time or the formal trade union—can also be interpreted in a flexible manner to ensure the protection of labor rights.

However, a flexible interpretation of the right at stake can generate other difficulties—mainly that of establishing a clear, stable, and consistent rule.³³⁰ This may indeed be a meaningful obstacle to the protection of labor rights because the legal system and the diverse actors in the workplace need to rely on clear and predictable legal definitions, particularly because of the unequal employee-employer power dynamic.³³¹ This difficulty can be overcome, though, by using additional methods for regulation in the digital reality. One of them could be elaborating an additional layer of procedural rules to accompany and sustain the flexible interpretations. I refer to this suggestion in the following Section.

B. *Adding a Procedural Layer*

Procedural rules refer to a set of rules that “governs the behaviour of workers, managers, trade unions, employers’ associations, state officials, and others who become involved in the process of job regulation.”³³² They are considered to be a meaningful tool to give employees basic legal protection from an employer’s “unjust discipline.”³³³ The suggestion to add a procedural layer to the category in question is mainly made because, unlike substantive laws, procedural rules are less influenced by the fast and meaningful changes that labor law is experiencing in the digital real-

³²⁸ *Id.* at 650–76.

³²⁹ *Id.* at 675–76 (comparing the more successful Canadian model and the less successful Italian model).

³³⁰ *Id.* at 675–78, 680–81 (regarding the “worker” definition); Tammy Katsabian, *Employees’ Privacy in the Internet Age: Towards a New Procedural Approach*, 40 BERKELEY J. EMP. & LAB. L. 203, 241–42 (2019) (regarding privacy).

³³¹ See Austin, *supra* note 69, at 132; Doreen McBarnet & Christopher Whelan, *The Elusive Spirit of the Law: Formalism and the Struggle for Legal Control*, 54 MOD. L. REV. 848, 853, 873 (1991).

³³² *Procedural Rule*, OXFORD REFERENCE, <https://www.oxfordreference.com/view/10.1093/oi/authority.20110803100347464>.

³³³ Clyde W. Summers, *Individual Protection Against Unjust Dismissal: Time for a Statute*, 62 VA. L. REV. 481, 519 (1976).

ity, and they are less subject to manipulation by employers. An additional procedural layer can thus provide employees with clear tools to deal with the new threats they are facing.³³⁴ Procedural rules can also be simpler to follow and enforce.³³⁵

One possible procedural rule that would enable better protection of the rights in question is requiring participation by workers in decision-making processes in the workplace. This procedural rule would promise that the employees' group would have a genuine ability to resist in real time the manipulation of technology by employers.

Imposing a formal role of employees in decision-making processes at the workplace has lately gained much support from U.S. scholars,³³⁶ including with regard to the specific background of the digital reality,³³⁷ as well as around the world with respect to the COVID-19 pandemic.³³⁸ At a practical level, there are various ways to enable the meaningful participation of employees in decisions that are related to their status and rights.³³⁹

For instance, in some European countries, procedural rules regarding the participation of employees' representatives in decision-making processes were developed to deal with the blurriness between working time and leisure time. France was the first European country to require, in 2017, that workplaces with more than 50 employees engage with employees' representatives to set clear rules regarding the official working time of the employees and the ability to contact them outside the agreed formal working hours.³⁴⁰ This procedural rule was referred to as "the right to disconnect."³⁴¹ According to the French law, if the parties cannot reach an agreement, the employer must consult with employees' representatives and publish a charter that clarifies the duties and rights of the employees beyond formal working time.³⁴² This procedural rule can assist in dealing with the work-leisure blurriness

³³⁴ Cf. Katsabian, *supra* note 330, at 247–50 (regarding privacy); Tammy Katsabian, *It's the End of Working Time as We Know It: New Challenges to the Concept of Working Time in the Digital Reality*, MCGILL L.J. 380, 417–19 (2020) (regarding working time).

³³⁵ See STONE, *supra* note 4, at 96–99; Guy Davidov & Edo Eshet, *Intermediate Approaches to Unfair Dismissal Protection*, 44 INDUS. L.J. 167, 182 (2015) (stating that procedural rules are "easier for courts to review, easier for employees to enforce").

³³⁶ See, e.g., SHARON BLOCK & JAMIN SACHS, LABOR & WORKLIFE PROGRAM, CLEAN SLATE FOR WORKER POWER: BUILDING A JUST ECONOMY AND DEMOCRACY (2019), https://lwp.law.harvard.edu/files/lwp/files/full_report_clean_slate_for_worker_power.pdf.

³³⁷ See, e.g., SCHOR, *supra* note 12, at 148–76; Benkler, *supra* note 8 (manuscript at 21); Rogers, *supra* note 9, at 573, 576–77.

³³⁸ See, for example, the international initiative DEMOCRATIZING WORK, <https://democratizingwork.org/> (last visited July 29, 2021).

³³⁹ See generally BLOCK & SACHS, *supra* note 336.

³⁴⁰ MESSENGER ET AL., *supra* note 130, at 50.

³⁴¹ *Id.* at 49–51.

³⁴² *Id.* at 51.

in a way that is adjusted to employees' real needs and experience. However, and as many have said in criticizing the French law, it is also important to provide the parties with concrete instructions on how they should negotiate and to provide the employees' representatives with real power in the negotiation process.³⁴³

Based on this model, which was adopted in other European states as well,³⁴⁴ a procedural right regarding the question of working time can also be developed in the United States. Based on the European experience and the diminishment of trade unions' power in the United States,³⁴⁵ it is important that this sort of procedural rule ensure the authentic power of employees' representatives in dealing with the employer, even where there is no strong trade union to represent the employees' voices.³⁴⁶

In a similar manner, other procedural rules that focus on employees' participation can also be developed. For instance, as I have demonstrated in another work, there are concrete procedural rules that can be elaborated into the flexible models of privacy.³⁴⁷ We could add a procedural rule requiring every workplace to create a privacy policy in accordance with the workplace's unique characteristics and needs, in dialogue with, and with the agreement of, employees' representatives.³⁴⁸ To balance the power dynamic between the parties, this procedural rule could include a semi-mandatory arrangement of the privacy policy imposed on every workplace with more than a specified number of employees.³⁴⁹ The employer would be able to modify the semi-mandatory arrangement only if it has its own detailed privacy policy that was written in collaboration with employees' representatives.³⁵⁰ A detailed privacy policy would allow all relevant parties to know in advance what they are and

³⁴³ See, e.g., Emanuele Dagnino, *The Right to Disconnect in the Prism of Work–Life Balance: The Role of Collective Bargaining: A Comparison Between Italy and France*, in TRANSFORMATIONS OF WORK: CHALLENGES FOR THE NATIONAL SYSTEMS OF LABOUR LAW AND SOCIAL SECURITY (Giuseppe Casale & Tiziano Treu eds., 2018).

³⁴⁴ Following France, in 2018, companies in Spain also developed a right to disconnect that is designed as a procedural collective right that demands negotiation between the parties. Italy also developed a similar law, but unlike in France and Spain, in Italy the negotiation is being done on an individual basis. See Facundo M. Chiuffo, *The “Right to Disconnect” or “How to Pull the Plug on Work”* 9 (June 23–25, 2019) (paper presented at the 4th Labour Law Research Network Conference); Dagnino, *supra* note 343.

³⁴⁵ See *supra* note 257 and accompanying text.

³⁴⁶ Cf. BLOCK & SACHS, *supra* note 336, at 28–44.

³⁴⁷ Katsabian, *supra* note 330, at 243–54.

³⁴⁸ See BIRNHACK *supra* note 75, at 462.

³⁴⁹ Cf. Guy Mundlak, *Information-Forcing and Cooperation-Inducing Rules: Rethinking the Building Blocks of Labour Law*, in LAW AND ECONOMICS AND THE LABOUR MARKET 55, 77–83 (Gerrit de Geest, Jacques Siegers & Roger Van den Bergh eds., 1999).

³⁵⁰ *Id.*

are not allowed to do, what is being monitored, and what is being kept private, thereby enabling a clear and firm concept of privacy.

Another procedural rule that was suggested in the privacy case (although, it does not focus on the notion of participation of employees' representatives) is one requiring use of an anonymous curriculum vitae (CV) process in the initial stage of recruiting candidates in the workplace.³⁵¹ The idea of an anonymous recruiting process has been offered in several countries outside the United States as part of the struggle against discrimination in relation to "classified" details such as date of birth, nationality, and gender.³⁵² A unique anonymous recruiting process could deal with the modern privacy paradox by preventing the current practice of monitoring a candidate's activity on social media sites via AI. An anonymous CV process would be more useful than applying only a contextual concept of privacy, since following the contextual method alone, and proving in court that an employer relied on a candidate's private realm in the recruiting process, would be difficult.³⁵³ An anonymous CV process would also offer an optimal balance between an employee's right to a private life before hiring and the prerogative of the employer to freely select employees. This is true because it would prevent the employer from tracking a candidate's private activity online only before interviewing her. In the next stage, after the interview, the candidate's name would be revealed; however, she would at least have a chance to present herself at the interview and create an impression with no pre-judgment except based on the professional, anonymous CV.³⁵⁴

In a similar manner, other procedural rules should be developed regarding the right to privacy, working time, employees' status, and employees' collective action. In that way, instead of the current situation, in which the law is being blurred and manipulated by employers, the law would contain additional procedural protections that are less vulnerable to manipulation and technological modification and can better ensure the protection of labor rights.

³⁵¹ See Katsabian, *supra* note 330, at 244–47.

³⁵² See GILL KIRTON & ANNE-MARIE GREENE, *THE DYNAMICS OF MANAGING DIVERSITY: A CRITICAL APPROACH* 97 (2016) (United Kingdom); Nicolas Boring, *France: Government Must Apply Law Requiring Anonymous Job Applications*, LIB. CONGRESS (July 30, 2014), <http://www.loc.gov/law/foreign-news/article/france-government-must-apply-law-requiring-anonymous-job-applications/> (France); Annabelle Krause, Ulf Rinne & Klaus F. Zimmermann, *Anonymous Job Applications in Europe*, 1 IZA J. EUR. LAB. STUD. 1, 3–4 (2012) (Germany); Catherine Skrzypinski, *Will Anonymous Job Applications End Hiring Discrimination in Canada?* SOC'Y HUM. RES. MGMT. (Sep. 6, 2013), <https://www.shrm.org/ResourcesAndTools/hr-topics/global-hr/Pages/lAnonymous-Job-Applications-Canada.aspx> (Canada).

³⁵³ Katsabian, *supra* note 330, at 244–45.

³⁵⁴ Cf. RONSON, *supra* note 107, at 121–31, 201–04, 210–25, 264–76.

C Using Technology as Part of the Solution

Finally, technology itself can and should be modified to ensure the protection of labor rights. As was explained at the start, like the law, technology is not deterministic and does not have to lead society to a more blurred and flexible direction.³⁵⁵ In other words, technology does not have to be an obstacle to the protection of labor rights; rather, it can be part of the solution.³⁵⁶

In this regard, another way to deal with the flexibility and blurriness that the digital reality has enabled is to develop technological solutions to ensure the protection of labor rights. For instance, when dealing with the right to privacy and the procedural rule of recruitment based on an anonymous CV, as detailed above, technology must be an integral part of the solution. This is so because technology is required to enable the uploading of a candidate's full CV without her name. In this way, the internet could be used not as a tool to penetrate the candidate's private life (for instance, by monitoring her social media activity), but rather to protect the private conduct of a candidate at least until the interview stage.

In a similar manner, when dealing with the time difficulty and the blurring of working time and leisure time, ICT can be used as a tool, not (just) to blur the line between work and leisure, but also as part of the solution. As mentioned earlier, because ICT enables work to be done outside of the official workplace, many working hours are not counted in an employee's formal working time and salary.³⁵⁷ The simplest solution to these unseen and unpaid working hours would be to have a rule requiring them to be automatically counted by using ICT.³⁵⁸ This solution is already being implemented around the world. Some EU countries have already adopted partial arrangements, mandatory or optional, to enable the electronic recording of working schedules conducted outside the workplace and have emphasized the importance of these arrangements.³⁵⁹ This sort of technological solution can ensure that all the working hours of an employee will be counted and paid for.

Another way to use ICT to solve the working time difficulty is to prevent working from distance. In other words, from a certain hour of the day, ICT can be used to *disable* work outside the office. This technological solution is already in use in Germany in some collective agreements in the car industry.³⁶⁰ In 2011, Volkswagen

³⁵⁵ See sources cited *supra* note 314.

³⁵⁶ Cf. LESSIG, *supra* note 7, at 81–82; Cohen & Sundararajan, *supra* note 314, at 119, 132; Perel & Elkin-Koren, *supra* note 314.

³⁵⁷ See INT'L LABOUR OFFICE, *supra* note 118, at 297–98, 310.

³⁵⁸ For a description of such programs, see, for example, WAJCMAN, *supra* note 16, at 165. Note that this may lead to a privacy violation; I refer to this obstacle and the possible solutions in Katsabian, *supra* note 334.

³⁵⁹ INT'L LABOUR OFFICE, *supra* note 118, at 297–98.

³⁶⁰ See, e.g., MESSENGER ET AL., *supra* note 130, at 50–51; Corinna Verhoek, *Anti-Stress Legislation in Germany—How Realistic Is the Prospect?*, IUS LABORIS (Sep. 30, 2014), <https://www.globalhrlaw.com/resources/anti-stress-legislation-in-germany—how-realistic-is-the>

reached an agreement with its employees' representatives that employees using BlackBerry smartphones (excluding senior management) would be able to receive emails on their cellphones only half an hour before and after formal working hours.³⁶¹ In this agreement, the smartphone is thus used *to disable* the sending and receiving of emails after a certain hour. Another car company in Germany, Daimler, created a policy that allows employees to set their email inboxes on holiday mode. This mode automatically *deletes* all incoming emails and notifies the sender of alternate contacts and the ability to resend the email again the day after during office hours.³⁶² Here again, instead of enabling remote work, ICT is used to prevent workers from sending and receiving emails after their formal working hours.

A final example of how technology can be used to support labor laws and overcome the internet's fragility concerns workers' community. As detailed above, full teleworkers and platform-based workers find it difficult to unionize. Full teleworkers find it difficult to unionize mainly because they do not meet one another regularly and therefore do not have the necessary foundations for unionization. Similarly, on top of the problem of their legal status, platform-based workers find it difficult to unionize because they are inherently isolated from one another.

This inherent isolation creates various difficulties, including in workers' ability to execute basic decisions regarding any unionization process.³⁶³ One of the crucial execution decisions deals with the initial stage of generating a formal union through a ballot. Part of the formal unionization process in the United States (and around the world) includes a ballot in which the union must achieve a certain percentage of supporting votes.³⁶⁴ The ballot requirement is one of the most challenging stages in the establishment of any union.³⁶⁵ This is particularly true of unionization by full telework or platform-based workers. Since these workers are inherently distanced from one another and particularly from a concrete workplace, it is less reasonable to think that they will travel to a remote physical place just to vote.³⁶⁶ Logically, it is more difficult for such a union to gain the necessary support in the ballot.³⁶⁷ In other words, the fact that the workers do not have a distinct physical workplace and tend to feel less obligated to one another may deter them from making the effort to vote at a remote voting spot at a specific time.

prospect; Tony Paterson, *Out of the Office and Not Taking Emails: Victory for VW Workers*, INDEPENDENT (Dec. 24, 2011, 1:00 PM), <http://www.independent.co.uk/news/world/europe/out-of-the-office-and-not-taking-emails-victory-for-vw-workers-6281231.html>.

³⁶¹ Paterson, *supra* note 360.

³⁶² Verhoek, *supra* note 360.

³⁶³ See *supra* text accompanying notes 283–84.

³⁶⁴ Rogers, *supra* note 270, at 1627–28.

³⁶⁵ *Id.* at 1627–30.

³⁶⁶ See *supra* text accompanying notes 274–75.

³⁶⁷ See *supra* text accompanying notes 274–75.

One way to overcome this phenomenon is by using the internet to conduct a ballot, i.e., to enable online voting.³⁶⁸ To be sure, online voting is considered to present many difficulties.³⁶⁹ However, it is also easier to implement than traditional balloting and can increase the voting percentages in the case of remote workers, since workers do not have to travel to a physical voting place at a specific time. Online voting is considered to be particularly useful in situations with multiple worksites, as with full teleworkers or platform-based workers, who are diverse in their physical locations and work schedules.³⁷⁰ Similarly, since a traditional ballot usually takes place on the employer's premises, it makes sense for the ballot in full telework or platform-based work to be conducted using the employer's virtual "premises": the internet.³⁷¹ Therefore, to deal with the unionization difficulty of full teleworkers or platform-based workers, technology should be used as part of the solution model and an online ballot should be part of the formal unionization process.

This is another example of how technology can be used to sustain labor laws, rather than as an obstacle to their implementation. Technology can and should be used to protect labor rights in the other scenarios presented in this Article.³⁷² In this way, together with the legal adjustments detailed above, I believe we can create a better and more updated protection of labor laws in the digital reality.

CONCLUSION

The digital reality has changed our society. It has enabled employers, tech companies, and others to modify the way people behave and interact in the labor context. This Article aimed to demonstrate that greater flexibility and blurriness of many basic legal categories in labor law is one of these crucial modifications. Then it was argued that the implementation of many labor rights is being jeopardized daily.

The Article opened by explaining the basics of internet technologies and raising two caveats. First, it is not only about technology; other factors are leading to this flexible, chaotic end as well. Second, we are not dealing with a brand-new phenomenon; the internet has mainly increased and emphasized previous phenomena, thereby generating new difficulties in labor. Thereafter, the Article demonstrated how the digital reality has enabled the blurriness of various legal categories in labor: the private sphere of the employee, working time, the employment contract, and

³⁶⁸ For further elaboration on the solution of online voting for platform-based workers in the UK context, see Katsabian, *supra* note 294, at 31–33.

³⁶⁹ This is because online voting is seemingly more vulnerable to cyberattacks and manipulation. See Sara Slinn & William A. Herbert, *Some Think of the Future: Internet, Electronic, and Telephonic Labor Representation Elections*, 56 ST. LOUIS U. L.J. 171, 192, 194–95, 204 (2011).

³⁷⁰ *See id.* at 206.

³⁷¹ *See id.* at 178–79.

³⁷² *Cf.* sources cited *supra* note 314.

the workers' community. The various examples that were presented demonstrated how the internet has enabled employers to dramatically strengthen what was there before—the wish to supervise employees, the pressure for employees to work beyond their formal working hours, the blurriness between the employee and independent contractor categories, and the fragility of the workers' community. This increased blurriness and fragility has created many new difficulties that require new ways of thinking about regulation and the way both the law and technology are being applied today. Therefore, at its end, the Article proposed three possible ways in which to start thinking about the regulation of labor rights in the digital reality: using the notion of flexibility as an interpretive legal tool (and not just as an obstacle), adding procedural rules for the protection of labor rights, and using technology as part of the solution.

The main objective of this Article was to observe from a bird's-eye view the phenomena we encounter today and to search for their organizing logic. This identification and mapping process can afford a better understanding of what is at stake and how we should start thinking about regulation in today's world. I hope that these targets were achieved. Based on this broad basis, I believe we can develop better protection of labor rights specifically, and more accurate thinking about law and regulation in the digital reality in other fields and contexts as well.