Relations industrielles / Industrial Relations

Digitalization and Regulation of Work and Employment: Introduction

Christian Lévesque, Peter Fairbrother et Nicolas Roby

Volume 75, numéro 4, automne 2020

URI : https://id.erudit.org/iderudit/1074558ar
DOI : https://doi.org/10.7202/1074558ar

Aller au sommaire du numéro

Éditeur(s)

Département des relations industrielles de l'Université Laval

ISSN

0034-379X (imprimé)
1703-8138 (numérique)

Découvrir la revue

Citer ce document

Lévesque, C., Fairbrother, P. & Roby, N. (2020). Digitalization and Regulation of Work and Employment: Introduction. *Relations industrielles / Industrial Relations*, *75*(4), 647–659. https://doi.org/10.7202/1074558ar

SYMPOSIUM

Digitalization and Regulation of Work and Employment: Introduction

Christian Lévesque, Peter Fairbrother and Nicolas Roby

This thematic issue is an effort to understand how digitalization is disrupting and reordering the regulation of work and employment. It also examines how these concerns may lead to organizational and institutional experimentation.[1]

The current phase of digitalization is driven by complex and diversified interconnections between data, objects, and platforms, making for clustered disruption and a sometimes diffuse sense of change. It is characterized by the emergence of new, advanced manufacturing technologies, machine-learning algorithms, ubiquitous devices, and data-driven applications and services. Among other things, these innovations include advanced robotics and 4.0 manufacturing systems, cloud computing and 'as a service' (aaS) applications, the Internet of Things, smarter supervisory control and data acquisition systems, advanced data discovery and business intelligence (BI), global supply chain management platforms and software solutions, additive and rapid prototyping technologies (3D printing), and intermediation platforms.

Such developments suggest a need to reconsider how business models are currently constituted. Alongside the emergence of the above-mentioned technologies, new business models are in development (Briken *et al.*, 2017; Degryse, 2016; Olleros and Zhegu, 2016), and some of them are underpinning the rise of 'network markets' and the platform economy. One important characteristic

Christian Lévesque, professor of employment relations, HEC Montreal, and Co-director of the Interuniversity Research Centre on Globalization and Work (CRIMT), Montreal, Quebec (christian.levesque@hec.ca). He is also co-responsible for the research on Industry 4.0, Work and Employment of the International Observatory of the Societal Impacts of AI and Digital Technology (OBVIA).

Peter Fairbrother, Professor of International Employment Relations and Deputy Director of the Centre for People, Organisation and Work, Royal Melbourne Institute of Technology (RMIT), Melbourne, Australia (peter.fairbrother@rmit.edu.au) and Affiliated Professor, HEC Montreal (FairbrotherARS@gmail.com). He is also a core researcher on the CRIMT International Partnership Project (CRIMT).

Nicolas Roby, scientific coordinator for the Interuniversity Research Centre on Globalization and Work-CRIMT, (nicolas.roby@umontreal.ca.

Acknowledgments: We wish to thank the editor and co-editor of *Relations industrielles/Industrial Relations* (*RIIR*), respectively Anthony Gould and Yves Hallée, as well as their dedicated team, for their support and insightful editorial work. We also wish to acknowledge the contributions of the referees in helping to improve all the articles and steer this issue to fruition.

of the new business models is their capacity to capture economic rents through the marketization of previously under- or unexploited resources. By converting our daily lives into usable data, interconnected devices, machine-learning algorithms and online applications amplify the potential for creating and harnessing new sources of value. In the new models, digitalized data become a strategic resource, and the consumer, a producer of digital commodities.

There is much discussion and debate in academic and public circles about the disruptive impacts of the current phase of digitalization. Warhurst and Hunt (2019: 1) list three aspects of digitalization that changes work and hence labour markets: digitally-enabled machines with artificial intelligence (AI); digitalization of processes that offer enhanced possibilities for processing, storage and communication of information; and use of digital networks to coordinate economic transactions through platform-based algorithms. These changes are expected to flow through labour markets and practices in three ways. The first way concerns the circumstances in which technological innovation, in the form of automation, machine work and artificial intelligence systems, may or does shape work (West 2018; Berg *et al.*, 2018). More specifically, it is argued that digital technologies are being used deliberately and instrumentally to shape work and employment relations; for example, via online platforms (Frey and Osborne, 2017). Second, the increase in jobs in the service and information sectors has been accelerated by digitalization, as has been the decline in jobs in the production and sourcing of material goods (OECD, 2019a and 2019b). Third, with fewer employment contracts providing a 'standard employment relationship,' there has been a consequent proliferation of precarious forms of employment (Standing, 2014). As noted, whatever the specific experience one has with precarious employment, and whatever the current circumstances, these new developments bring an element of insecurity with significant health risks (e.g., Lewchuk, 2017). They are broad in their effects and have implications not only for tasks in the work environment itself but also for how people are employed and where they are employed. Although, to date, these developments do not seem to have increased joblessness, they may be associated with an increase in underemployment (e.g., for the U.S., see Atkinson and Wu, 2017).

There is general agreement that institutions are out of sync with the realities of contemporary labour markets. Policy makers are failing to meet the challenges of the more profound transformations associated with the rise of the digital economy. The requisite institutional frameworks lack the capacity to regulate and govern the diffusion of innovation and mitigate the disruption on international, national and regional levels (Sassen, 2015; Schwab, 2016; Zuboff, 2019). Furthermore, collective actors (firms, governments, trade unions, associations, consultancies, development agencies, non-governmental organizations) in diverse

organizational, industry and institutional contexts are engaging in a prolonged period of experimentation in the re-/regulation of work and employment to deal with these changes (Murray *et al.*, 2020). Through uneven and contested processes, such experiments involve the creation of new norms, practices, and policies, yielding both positive and negative outcomes. They can enhance or reduce inequalities, worsen or improve working conditions, increase or reduce the asymmetries of power, and be more or less inclusive, democratic and participatory.

In this thematic issue, we seek to contribute to the discussion. We consider three complementary questions: the future of work, labour agency and power, and organizational and institutional experimentation.

The Future of Work

Debates abound on the 'Future of Work,' including how the increased digitalization of systems and processes affects jobs, work and employment (e.g., ILO, 2018). Much commentary has focused on the job displacement that may arise through the digitalization of work, with forecasts of possible widespread job losses and high levels of unemployment (Brynjolffson and MacAfee, 2014; Frey and Osborne, 2013; Ford, 2015). This pessimistic prognostic has been contested by several scholars (Agrawal *et al.*, 2018; Autor, Mindell and Reynolds, 2019; Thompson, 2020) and the debate is shifting toward the quality of jobs and work (Stanford, 2020).

One prominent theme in the Future of Work literature relates to the links between digitalization, work organization and the demands for specific worker skills. The argument is that digitalization has a polarizing effect: it eliminates routine and repetitive work on the one hand, while complementing higher order work on the other. Such developments suggest a profound shift in the nature and character of work, with displacement of labour in routine and repetitive work. Of course, such displacement means that alternative jobs are likely to be sought as this type of work disappears, a process often leading to precarious forms of employment (Peetz, 2019). Increasingly, work is becoming specialized as workers develop skills and are employed in jobs defined by digitally demarcated tasks. Such labour specialization is associated with spatially concentrated development both for single entities and for clusters of industry in a single location (Smith, 2010). The concentration of workers makes possible larger instruments of labour and finer divisions of labour, as well as sustainable access to larger geographic markets (Harvey, 2006).

In the context of digitalization of work, there has been an emergence of largely unregulated platform work. This lack of regulation is due partly to the uneven development of such work, which ranges from care work to food and transport

services and to various forms of data capture and utilization. As these forms of work have developed, questions have arisen about the nature of employment, about self-employment versus being an employee, about the terms and conditions of employment, and about the relations between the people who do the work and others who may own and control the digital processes. The specificity of these arrangements has become part of debates about flexible employment, casualization, project work and forms of self-employment.

The articles in this thematic issue show that the impact of digitalization on work is uneven and diverse. In some cases there may be deskilling and a form of 'Neo-Taylorism' (see, in this issue, Gautié, Jaehrling and Perez), while in other cases there may be an increase in work quality through a reduction in hazardous tasks (see, in this issue, Stroud, Timperley and Weinel). In the more extreme cases, such as the online work platforms discussed by Degryse, digitalization is reconfiguring the very nature of work and weakening the traditional forms of work regulation. It may then be more appropriate to speak of the futures, rather than future, of work. Moreover, such a focus will prompt us to consider the complementarities between types of technology, work organization and skill deployment, as well as the social relations in which they are embedded.

Labour Agency and Power

Technological innovation is embedded in often unacknowledged social relations. The implementation and impact of digitalization is thus a social process, which foreshadows the implementation of the technical innovation. In general, employers and governments are exploiting opportunities to reconstitute work via technological innovation. Even though these actors are in a dominant position, it is also the case that workers and trade unions are not powerless; they can exercise their agency to contest and thus shape the process and outcome of digitalization.

Digitalization poses old and new challenges to the labour movement. Since the onset of industrialization, trade unions, and their precursors, have negotiated the introduction of new technology in the workplace, focusing on how it displaces jobs, reorganizes work routines and impacts wage formation. But the wave of 21st century transformations is posing new challenges to workers in the ways they organize and represent themselves in the platform economy. The ongoing debate on digitalization has sparked renewed interest in how social partners can engage in dialogue on these emerging issues. While much of the literature focuses on how trade unions can organize and represent platform workers, the ways social partners can negotiate workplace digitalization is also gaining attention.

The analytical point is that the exercise of labour agency is key to assessing the outcomes of digital disruption. Such developments can be contested, challenged and extensively negotiated with diverse results. This observation raises questions about the capacities of collective actors, particularly unions, to address such changes. It is the case that more than one process of digitalization is taking place. As noted, the introduction and implementation of digitalized innovation has been uneven, ranging from the comprehensive deployment of these technologies to their partial and specialized utilization in established and ongoing processes. At the same time, unions have shown diverse forms of organization and a wide range of capabilities and resources in how they exercise their agency in this complex world of work (on these capabilities, see Lévesque and Murray, 2010; and on the importance of organization, see Fairbrother, 2015). In short, the challenge is to understand and explain the exercise of labour agency in the context of digitalized disruption.

The main thrust of this analysis is that there are a variety of ways in which these developments raise questions about labour agency and power dynamics, within and beyond the workplace. The authors of this collection of articles seek to explain the role of collective actors, notably trade unions but not exclusively, in shaping the contours and impacts of digitalization. Three analytical points may be made. First, the capability of trade unions to respond and influence is shaped by the structural power of workers and the capacity of trade unions to mobilize their organizational power. Rutherford and Frangi note that union locals differ significantly in their practices in the Canadian auto industry. In contrast, Gautié, Jaehrling and Perez's comparative study points to the constraints on organization in cases where employer practices and organizational implementation converge, as is the case in French and German retail warehouses. Second, unions may be in a position to develop and mobilize their power resources or demonstrate the ineffectiveness of traditional union power resources. The multilevel study by Gasparri and Tassinari focuses on trade union linkages to power resources in Italy. The study's multilevel approach shows that the trade unions are coping with digitalization by adapting rather than transforming their traditional repertoire of action. Although Coiquaud and Morissette also emphasize power dynamics, they highlight the fact that traditional union power resources may be ineffective in dealing with the arrival of platform companies like UBER, particularly when the state becomes an ally of such mega companies. Third, unions may help develop new forms of collective organization. To illustrate, Degryse and Hocquelet in their respective contributions show how new forms of collective organization, often based on mobilization of new technology, can enhance the collective capacity of workers to act and shape the regulation of work and employment.

Organizational and Institutional Experimentation

Through experimentation, actors in the world of work seek new ways of organizing work and employment in the process institutionalizing them as new understandings, norms, and rules (Murray *et al*., 2020: 1). There are two complementary dynamics. First, technological transformation due to digitalization of work is unprecedented in its scope and scale. The magnitude of change may be seen in employment practices, in ways of organizing the performance of tasks and in ways of defining work and employment in emerging contexts, such as platform enterprises. The new ways are sometimes contested and challenged, sometimes negotiated and sometimes institutionalized by fiat. Second, social actors seek to regulate and re-regulate work and employment relations to pursue their specific interests as employers, as employees, or as de facto employees—evident in some digitalized settings.

The argument in this thematic issue is that the fault lines of disruption brought about by digitalization provide opportunities for experimentation by employers and unions. Many employers often unilaterally establish new work practices and employment relations, such as those who seek to marketize digital technological innovations (Briken *et al.*, 2017; Degryse, 2016; Olleros and Zhegu, 2016). Elsewhere, large established organizations in such industries as steel seek to digitalize work practices on their premises to boost efficiency, productivity, safety and so forth. In all cases, organizational experimentation is under way and it remains to be seen whether these will be institutionalized into sustainable policies and practices. Whatever the case, employees and their equivalents are confronted with a major challenge in their efforts to organize collectively.

This thematic issue places much emphasis on the disruptive impact of digitalization on the regulation of work and employment. As noted, traditional forms of institutional regulation appear to be out of sync with the reality of the contemporary labour market. Degryse takes a step forward by arguing that the platform economy is actually undermining the foundations of the social model of work and employment that came into being over the last century. This line of thinking is consistent with the Coiquaud and Morissette study of the taxi cab industry in Quebec. Such developments also create space for different kinds of experimentation and exert pressure on collective actors to create new norms, rules and cognitive frames.

Power relations affect the process and outcome of experimentation. In some cases, experimentation is dominated by companies and/or the state and yields negative outcomes for workers (e.g., Coiquaud and Morissette; Gautié, Jaehrling and Perez). Elsewhere, the results are less clear-cut and yield both positive and negative outcomes. A distinctive feature of such cases is the active role

of labour and trade unions in reinventing their identities, repertoires of action, networks and organizational and sectoral governance structures. In some cases, the experimentation has involved recasting and extending the traditional repertoire of action to increase the capacity to act of trade unions (Stroud, Timperley and Weinel; Rutherford and Frangi; Gasparri and Tassinari). In other cases, the experimentation has involved a more radical change to trade union identities, networks and repertoires of action; for example, the cases described by Degryse and the OUR Walmart campaign studied by Hocquelet. The latter study demonstrates how an independent association, initially promoted as part of a union campaign, developed an out-of-the-box repertoire of action and was able, via the utilization of digital technology, to reinforce worker identity and solidarity. The lessons are striking.

The experimentation processes by involving employers and unions has created challenges for both sets of social actors. Too often, the role and place of unions in these processes is overlooked or unwittingly rejected or neglected. This thematic issue seeks to rectify that absence and encourage public debate on the importance of recognizing such experiences and engagements. We all argue that workers should be able to take steps toward a better working world than the current one, where work is often disruptive, exploitative and precarious.

Our Inquiry

The seven articles of this thematic issue tackle these three complementary questions from various viewpoints.

Christophe Degryse argues that the development of the digital economy and, in particular, of online work platforms has had the effect of redefining the workplace, often in negative ways. In some sectors, there has been a weakening of work structures and arrangements upon which our systems of labour law, social protection and collective bargaining have been founded, namely the workplace unit, working time, and the organization of work. Degryse provides a compelling reminder of how the institutional regulation of work was crafted, at least in part, as a response to a particular system of production and configuration of work. He invites us to move beyond debates about the impact of digitalization on job numbers and to focus on the ways in which online platforms, by transforming the very nature of work, are weakening the foundations of the historical social model upon which work is regulated in most industrialized countries. The author argues that such weakening of the current model is opening up space for social innovation. The latter part of the article outlines a series of innovative practices and experimentations that have come about to address these matters. Examples include the creation of autonomous collec-

tives, the organization of collective action and the elaboration of claims and, significantly also, the renewal of more traditional repertoires of trade union action. While recognizing that these forms of experimentation and their associated strategies are fraught with obstacles and difficulties, the author concludes that, despite their limitations, they can be seen as an embryo of a new social model that will be better adapted to the platform economy.

Urwana Coiquaud and Lucie Morissette investigate the process of initiating regulatory measures to address the disruption that appears to be part of digitalization of work practices and arrangements today. They present a longitudinal analysis of the transformations the taxi cab industry has undergone in Quebec (Canada) since the arrival of Uber, and of the role the state and the company have played in recasting the rules governing the sector. The authors offer two complementary perspectives. First, they assess the regulatory responses of public authorities; second, they develop an analysis of the processes that have guided the development of these new rules, including who initiated them. By examining each stage of this institutional reordering process and emphasizing the role of the state and the platform company, the authors seek to better understand the influence of "regulatory entrepreneurs"—in this case, of Uber—in the adoption of new public policies. They develop an exploratory framework that allows for a critical, normative evaluation of the way rules are manufactured in a context of public policy disruption. Their analysis shows how the regulator was captured by Uber and how, as a result, the adopted rules ignored the basic principles of neutrality and transparency to the detriment of the public good. This research illustrates the unprecedented nature of a platform actor's intervention in public policy development and highlights the need for stricter principles to frame such interventions.

Mathieu Hocquelet addresses the importance of workplace-based forms of collective organization that are independent of unions but have a union heritage. He considers whether such collective organization can address the challenges of technological innovation and disruption. Hocquelet focuses on Organization United for Respect at Walmart (OWM), one of the most ambitious national organizing campaigns in the United States over the last decade. Launched in 2011, Our Walmart (OWM), an association funded by one of North America's leading service unions (United Food and Commercial Workers - UFCW), has helped to secure a series of wage victories from the retail giant. The latter has a history of opposing attempts to organize employees and being inflexible in dealing with employee organizations. The union campaigns enabled unorganized workers to organize and secure collective representation in an industry that relies on low-wage labour. The OWM was able to organize and mobilize employees from the bottom up and across the retailer's divisions. The author focuses on the organizational work of the association between 2013 and 2018, and he shows that

the continuation of its organizing effort after 2014 led it to make its own shift toward digitalization. In particular, he points out that the launch of OWM by the UFCW as part of the union's Walmart campaign (2011-2015), and its existence as an association independent of the union since then, made possible the development of two different approaches toward organizing. This effort involved combining digital innovations with active employee participation in the association. In short, the association seized the opportunity to make racial and gender inequalities more visible, while promoting the co-construction of large-scale professional solidarity in companies and sectors that had previously been considered out of reach.

Dean Stroud, Victoria Timperley and Martin Weinel explore the workplace implications of a specific Industry 4.0 innovation, that is, the adoption of drone technology in the steel industry. The authors bring to the fore debates on the digital workplace via a discussion of the relationship between the material forces of production and the social relations within which they are embedded (Edwards and Ramirez, 2016). Based on data from two European industrial sites, the authors suggest that the adoption of drone use is likely to be complicated by a number of social, economic and legal factors, the effects of which are, at best, extremely difficult to predict. Introduced for their potential as labour-saving devices, drones seemingly offer a safer and more efficient way of checking for defects in remote or inaccessible areas. However, whilst employers might imagine that such digital technologies might substitute for, replace, or intensify labour, the research evidence suggests that workplace realities make such an adoption highly contingent, thereby challenging overly deterministic narratives. The authors highlight several such contingencies and discuss how the adoption of digital technologies will ultimately be shaped by the power, interests, values and visions prevailing within the workplace, as well as the wider polity and public culture. Following Thompson and Briken (2017: 258), they note that in debates on digitalization and robotization it is important to present what workers actually experience. They conclude by showing how workers might exercise their collective capacities and agency to shape the use of such technologies.

Tod Rutherford and Lorenzo Frangi analyze union roles in the adoption of High Performance Work Systems (HPWS) during the first steps in the deployment of Industry 4.0 in the Canadian auto industry. This industry has long been a leader in the introduction of new forms of work organization and technology, most recently in relation to Industry 4.0—a manufacturing system featuring advanced robotics, digitalization and artificial intelligence. While attention has focused on the ways that trade unions negotiate systems, such as HPWS, little consideration has been given to the continuing importance of employees in shaping, if not 'hybridizing,' such new production processes. Based on a study of UNIFOR trade

union locals in Canadian automotive assembly plants, the authors argue that Industry 4.0 has to be analyzed as embedded in the ways that trade unions have influenced the almost universal adoption of HPWS in this sector. They argue that while I 4.0 involves the deployment of different managerial strategies, it is necessary to develop an analytical framework for examining union roles in negotiating HPWS and technology adoption. Their 2017-2018 research demonstrates both commonalities in adoption and union influence on 'hybridization.' However, there were important differences in practices between union locals, which reflect: 1- firm-plant competitive positions; 2- the union's overall approach; and 3- internal union local solidarity and narratives around HPWS and Industry 4.0. This examination highlights the importance of structural constraints on the exercise of power, as well as the importance of resources in shaping union responses.

Jérôme Gautié, Karen Jaehrling and Coralie Perez consider how digitalization, in conjunction with changes in the economic environment, affects low-skilled jobs in the retail logistics sector, with marked implications for union capacity building. Based on expert interviews and company case studies in French and German retail warehouses, the authors investigate the meaning of the adaptation and adjustment of low-skilled jobs to technological change and innovation. They discuss the already noted 'neo-Taylorist' transformation in such workplaces, and they identify what is driving the stabilization of these trends. By focusing on the company level, they shed light on the role of organizational choices and the way those choices are re-negotiated and influenced by employees and their representatives. These findings point to a convergence on a digitally enhanced 'Neo-Taylorism' characterized by deskilling processes and intensification of performance control. The authors argue that the limited cross-country variations can largely be explained by the similarity of effects across countries. These developments involve 'lean' supply-chain transformation and a trend toward outsourcing and offshoring, both of which negatively affect workers' structural power. These trends are part of a longstanding 'lean' transformation of the retail supply chain, with the result that the ability of staff representatives to mobilize their own power resources is constrained and their capacity to affect change correspondingly limited.

Stefano Gasparri and Arianna Tassinari look at how Italian unions are adapting to the emerging threats and opportunities of digitalization in employment relations. They consider the factors that account for the focus and varying effectiveness of union responses. They show how in the context of significant digitalization-related challenges, historically strong institutions of industrial relations are now increasingly under pressure. The authors find that Italian union strategies and demands have so far been focused primarily on macro- and meso-level interventions. The unions' aim, involving diverse union confedera-

tions, has been to extend traditional forms of protection—especially sectoral collective bargaining agreements—to deal with the disruptive effects of digitalization. This move has been coupled with limited innovation in the agenda and discursive repertoires of unions at the micro-level of intervention. There has also been a shift in union preferences toward the inclusion of platform workers and self-employed workers in their constituencies. Whilst highlighting the importance of agency, the authors find that the focus and effectiveness of union interventions is crucially shaped by prior institutional legacies and distributions of power resources, as well as the ideological orientation and strategic capabilities of individual unions. Overall, Italian unions have thus far tended to privilege gradual strategic responses based on extension and adaptation of existing institutions. It remains to be seen whether such adaptive approaches will be sufficient to effectively govern and shape the digital transformation of work, or whether more radical institutional experimentation will become necessary.

Final Comment

This thematic issue contributes to the debates on digitalization and regulation of work and employment. We hope it will generate further empirical research and theoretical development. These are challenging times that require responses to the disruption and exploitation that have arisen with technological innovation in the workplace.

Note

1 This special issue draws on an international and interdisciplinary collaborative project: the CRIMT International Partnership Project on Institutional Experimentation for Better Work. Funded by the Social Sciences and Humanities Research Council of Canada and with substantial partner contributions, this multi-year project (2017–2024) brings together the partners of the Interuniversity Research Centre on Globalization and Work (www.crimt.net, a strategic cluster funded by the Fonds de recherche du Québec – Société et culture), and a wide variety of Partner Centres and affiliated researchers in more than a dozen countries through ongoing dialogue on the theoretical and practical challenges of experimentation in the regulation of work and employment.

References

Acemoglu, Daron and Pascual Restrepo (2019) "Automation and New Tasks: How Technology Displaces and Reinstates Labor." *Journal of Economic Perspectives*, 33 (2), 3-30.

Agrawal, Ajay, Joshua Gans and Avi Godfarb (2018) *Prediction Machines: The Simple Economics of Artificial Intelligence*. Boston: Harvard Business Review Press.

Atkinson, Robert D. and J. John Wu (2017) *The 2017 State New Economy Index: Benchmarking Economic Transformation in the States*. Online at SSRN: <https://ssrn.com/abstract=3066923> or <http://dx.doi.org/10.2139/ssrn.3066923>.

Autor, David, D. A. Mindell and Elisabeth B. Reynolds (2019) *The Work of the Future: Shaping Technology and Institutions*. Massachusetts: Massachusetts Institute of Technology (MIT). Online at: <https://workofthefuture>.

Berg, Janine, Marianne Furrer, Ellie Harmon, Una Rani and M. Six Silberman (2018) *Digital Labour Platforms and the Future of Work: Towards Decent Work in the Online World*. Geneva: International Labour Office. Online at: <https://www.ilo.org/global/publications/books/forthcoming-publications/WCMS_645337/lang--en/index.htm>.

Bradford, Neil and Allison Bramwell, eds. (2014) *Governing Urban Economies: Innovation and Inclusion*. Toronto: University of Toronto Press.

Briken, Kendra, Shiona Chillas and Martin Krywdzinski, eds. (2017) *The New Digital Workplace: How New Technologies Revolutionize Work*. Basingstoke: Palgrave, Critical Perspectives on Work and Employment.

Brynjolffson, Erik and Andrew MacAfee (2014) *The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies*. Boston: Norton.

Casilli, Antonio (2019) *En attendant les robots. Enquête sur le travail du clic*. Paris: Seuil.

Degryse, Christophe (2016) *Les impacts sociaux de la digitalisation de l'économie*. Bruxelles: ETUI.

Fairbrother, Peter (2015) "Rethinking Trade Unionism: Union Renewal as Transition." *The Economic and Labour Relations Review*, 26 (4), 561-576.

Ford, Martin (2015) *Rise of the Robots: Technology and the Threat of a Jobless Future*. New York: Basic Books.

Frey, Carl Benedict and Michael Osborne (2017) "The Future of Employment: How Susceptible Are Jobs to Computerisation?" *Technological Forecasting and Social Change*, 114 (C), 254-280. Online at: <http://dx.doi.org/10.1016/J.TECHFORE.2016.08.019>.

Harvey, David (2006) *The Limits to Capital*. (New and Fully Updated Edition), London and New York: Verso.

Howcroft, Debra and Phil Taylor (2014) "'Plus ça change, plus c'est la même chose': Researching and Theorising the New Technologies." *New Technology, Work and Employment*, 29 (1), 1-8.

International Labour Organization [ILO] (2018) *Global Commission on the Future of Work: Technology for Social, Environmental, and Economic Development*. Online at: <https://www.ilo.org/wcmsp5/groups/public/---dgreports/---cabinet/documents/publication/wcms_618168.pdf>.

Lewchuk, Wayne (2017) "Precarious Jobs: Where Are They, and How Do They Affect Well-Being?" *Economic and Labour Relations Review*, 28 (3), 402-419.

Lévesque, Christian and Gregor Murray (2010) "Understanding Union Power: Resources and Capabilities for Renewing Union Capacity." *Transfer*, 16 (3), 333-350.

Murray, Gregor, Christian Lévesque, Glenn Morgan and Nicolas Roby (2020) "Disruption and Re-Regulation in Work and Employment: From Organisational to Institutional Experimentation." *Transfer*, 26 (2), 135-136.

OECD (2019a) OECD *Employment Outlook 2019: The Future of Work*. Paris: OECD Publishing. Online at: <http://www.oecd.org/employment-outlook/2019/>.

OECD (2019b) *Policy Responses to New Forms of Work*. Paris: OECD Publishing. Online at: <https://doi.org/10.1787/0763f1b7-en>.

Olleros, Xavier and Majlinda Zhegu, eds. (2016) *Research Handbook on Digital Transformations*. London: Edward Elgar Pub.

Peetz, David (2019) *The Realities and Futures of Work*. Australian National University: ANU Press.

Sassen, Saskia (2015) "Digitization and Work: Potentials and Challenges in Low-Wage Labor Markets." Position Paper. Online at: <www.saskiasassen.com/ PDFs/publications/digitization-and-work.pdf>.

Schwab, Klaus (2016) *The Fourth Industrial Revolution*. Geneva: World Economic Forum.

Smith, Neil (2010) *Uneven Development: Nature, Capital and the Production of Space*. Athens, Georgia: University of Georgia Press.

Standing, Guy (2014) "Understanding the Precariat through Labour and Work." *Development and Change*, 45 (5), 963-980.

Stanford, Jim (2020) *Thinking Twice about Technology and the Future of Work*. In Skills Next. Toronto: Public Policy Forum. Online at: <https://ppforum.ca/publications/thinking-twice-about-technology-and-the-future-of-work/>.

Thompson, Paul (2020) "Capitalism, Technology and Work: Interrogating the Tipping Point Thesis." *The Political Quarterly*, 91 (2), 299-309.

Warhurst, Chris and Will Hunt (2019) "The Digitalisation of Future Work and Employment: Possible Impact and Policy Responses." *JRC Working Papers Series on Labour, Education and Technology*, No. 05, European Commission, Joint Research Centre (JRC), Seville.

West, Darrell (2018) *The Future of Work: Robots, AI and Automation*. Washington DC: Brookings Institution Press.

Zuboff, Shoshana (2019) *The Age of Surveillance: The Fight for a Human Future at the New Frontier of Power*. London: Profile Books.