
Digital Technologies and Workplace Relations: managers, colleagues, trade unions

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Lorenzo Frangi

Associate Professor, Department of Organization and Human Resources, ESG UQAM, Montreal, Quebec

Anthony C. Masi

Professor, Desautels Faculty of Management, McGill, Montreal, Quebec

Rachel Faust

Research Assistant, Department of Organization and Human Resources, ESG UQAM, Montreal, Quebec

Natalia Rohraff

Research Assistant, Department of Management and Organizational Studies, Western University, London, Ontario

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Executive summary

Background:

As the world of work is being transformed by digital technologies, the Covid-19 pandemic accelerated the deployment of new working arrangements. Teleworking transitioned from emergency solution to common practice for employees, now and in foreseeable future. These new working arrangements have had a profound impact on the core dimensions of employment relations – manager-to-employee, colleague-to-colleague, and union-to-employer – making them more fragile, challenging, and with serious possible adverse consequences for organizational performance, employee wellbeing, and union relevance. To mitigate these negative consequences, a careful reading of the social scientific literature can identify potential, efficient strategies.

Objectives:

1. *Extant knowledge*: Precisely how teleworking affects each of the three core dimensions of employment relations has been explored to some extent in the stock of extant knowledge. Our knowledge synthesis highlights the topics that have been analysed, the research design and tools that have been developed and deployed, and the most significant findings, especially those that have strong policy implications.
2. *Policy implications*: We explore the policy implications for organizations and unions of core dimensions of the employment relationship. Where present, we report the policy implications that researchers themselves have discussed; otherwise, we infer potential strategies or develop suggestions by reasoning across different studies. In the conclusions, we summarize policy directions for organizations and unions, then drawing on them, we elaborate some public policy implications.
3. *Avenues forward*: Synthesising empirically demonstrated effects of teleworking on the three core dimensions of employment relations, allows us then to propose potential avenues for future research both for the academic debate and for the development of practitioner strategies.

Results:

[1] The fluidity of the teleworking workplace makes relations between managers and employees, among colleagues, and between union and employer more complex and fragile. Under these conditions the risk is high that managers, and even co-workers, might abuse control and surveillance mechanisms. Teleworking's flexibility can easily become a source of anxiety. Moreover, isolation and cleavages among colleagues presents challenges for trade union organizing, bargaining, and mobilising.

[2] To avoid the detrimental consequences of teleworking, organizations should limit the use of surveillance over and among employees, provide free-of-surveillance spaces for socialization among colleagues, and provide constant managerial support. The negative impact of teleworking can be limited by giving employees a collective voice, especially a union, and by having their working conditions set in a collective agreement. Unions need to leverage new digital strategies for organizing and have the power to negotiate in this diffuse workplace while coordinating with and supporting negotiations at the sectoral, national, and supra-national levels for all teleworkers.

[3] Academically, the path forward consists in moving from explorative to causal studies and by enriching studies with validated frameworks that can provide fine-grained insights. Finally, an applied and experimental research designs must be developed to test the applicability of proposed policy implications.

Key messages:

- Teleworking is a complex and fragile working arrangement that can have serious negative consequences on organizational performance, employee wellbeing, and union ability to influence employment relations.
- Several mechanisms can mitigate these adverse consequences: limiting surveillance, supportive supervision, leveraging the network potential of digital technologies, and providing employees with collective voice.
- Managers and unions must develop new competences to cope with and overcome teleworking's challenges. On a broader scale, specific labour laws and employment protection provisions can limit the most serious adverse consequences of teleworking.

Methodology:

Our literature review comprises articles in leading employment relations and cognate discipline journals with a focus on the last decade. We gained additional insights by analysing high-quality and publicly available practitioners' reports. This knowledge was classified along the three core employment relations dimensions – manager-to-employee; colleague-to-colleague; and union-to-employer. Within each category, topics, tools, findings, policy implications, and gaps have been highlighted. Based on the evidence for each dimension, and in the conclusion across dimensions, we elaborate theoretical and methodological ways forward for researchers and pragmatic strategies for practitioners.

1 Background

The COVID-19 pandemic accelerated significant trends in the evolution of the contemporary labour force. What had been a vague sense of unease regarding the role of digital technologies morphed into a profound change of the workplaces (Cascio and Montealegre 2016). For a significant portion of employees, the coronavirus pandemic quickly and solidly moved working remotely (teleworking) from “potential, future perk” to “everyday experience” (Gallacher and Hossain 2020; Hodder 2020). This transition to working from home evolved from a short-term temporary fix into a permanent solution (Brynjolfsson et al. 2020; Holgate 2020).

Workplaces have become more scattered, relationships are increasingly technologically mediated, and both are progressing quickly: at the individual level between managers and employees (Grant et al. 2013; Sewell and Taskin 2015), among colleagues (Fay and Kline 2011; Collins et al. 2016), and in terms of collective trade union representation (Aroles et al. 2019; FTQ 2019; Frangi and Poirier 2020).

Decades of research have demonstrated that the *manager-employee* individual relationship is per se characterized by myriad points of tension, specifically regarding frontiers of control and power over the production process (Edwards, 1992). Even in on-site workplaces, digital technologies have been used by managers to collect additional data about actions taken by their subordinates (Cascio and Montealegre 2016; Edwards and Ramirez 2016; Nyberg and Sewell 2014). Remote working configurations may provide employees with more opportunities to practice “slaking”, to engage in misbehaviours, and undertake covert actions, such as misuse, sabotage, and e-pilferage of platform resources (Nyberg and Sewell 2014; O’Neill et al. 2014). In the scattered teleworking workplace, managers may do extensive use of “panopticon” managerial power for constant observation, redirection, and even punishment of employee behaviours (Martin et al. 2016; Miele and Tirabeni 2020; Balliester and Elsheikhi 2018). Conversely, the promotion of supportive supervision in the context of remote working and limiting abusive management are central aspects of improving this dimension of employment relations (Collins et al. 2016).

Software-mediated relationships in the scattered workplace clearly have an impact on *colleague-to-colleague* relationships (Rockmann and Prat, 2015; Bellesia et al. 2019). Virtual interactions and physical isolation from colleagues have been shown to reduce cohesiveness among co-workers, increase competition among on performance scores, and transform peers into supervisors (Cascio and Montealegre 2016). Concerns have also been reported regarding the difficulty for workers to establish and sustain social relations through virtual interactions because of the lack of physical

presence and emotional responses (Baralou and McInnes 2013). Seen from a different perspective, other forms of communication such as writing and distant talking can alleviate these challenges (Baralou and McInnes 2013), create conditions for a friendly sociability that goes beyond the typical immediate circle of colleagues (Aroles et al. 2019), and diffuse supportive knowledge transfers (Faraj et al. 2011; Hwang 2015).

Finally, teleworking deeply challenges the *union-employer* dynamic. Research has demonstrated a transformational challenge for trade unions – i.e., from workplace-focused actions to outreach strategies for dispersed workers, using online spaces to develop a collective identity and solidarity (Frangi et al. 2020; Maffie 2020). In fact, unions may have more difficulty mobilizing workers around these key issues. Union grievances are transitioning from traditional workplace concerns to wider issues reflective of remote working arrangements that cut across employee’s levels and communities (Holgate 2020). Unions can play a major role in the adoption of requisite organizational structures, productivity changes, and workplace performance (Akhtar and Moore 2016).

The reshaping of employment relations has inserted itself on the research agendas of scientists, into the daily routines of practitioners, and features prominently in public debates about appropriate policies (Balliester and Elsheikhi 2018; Hodder 2020; Holland and Bardoel 2016). A patchwork of targeted, apparently short-term policies has begun to appear, attempting to reduce the potential for new forms of conflict (Balliester and Elsheikhi 2018). Our knowledge synthesis can potentially pave the way to more robust and efficient policies for the main actors of employment relations: managers, unions, and the state.

2 Methodology

We executed our knowledge synthesis in three steps:

[1] *Sources of knowledge.* We identified and searched three main sources of knowledge. First, we searched for publications relating to the topic in top-tier journals in employment relations. Specifically, we looked at journals classified as 3/4 and 4/4 on the Association of Business School rankings. Second, we explored cognate discipline journals, especially in the human resource management area. Finally, we also investigated the websites of major trade unions, think tanks, and professional organizations for on-topic documents. This last source, unfortunately, was not particularly fruitful in turning up relevant documentation.

[2] *Knowledge analysis*. We classified the knowledge we discovered along the three core employment relationships – manager-to-employee; colleague-to-colleague; union-to-employer. For each category, we categorized the topics analysed, research designs and tools, findings, and policy implications for organizations and unions.

[3] *Tracing paths*. Finally, a qualitative meta-analysis of the produced knowledge explains our reasoning for proposing avenues for future research and the development of appropriate policies.

3 Manager-to-employee

3.1 Topics

In the employment relations literature, studies dealing with the impact of teleworking on the relationship between managers and employees can be divided into three broad categories (Table 3.1):

[1] *Teleworking hyper-flexibility*. Focusing on flexible work arrangements, Spreitzer et al. (2017) highlight three core analytical dimensions of teleworking: numerical flexibility in *the employment relationship*: time management in *the scheduling of work*; *definition of the tasks* that need to be accomplished; and the *location where the work is realized*. Various forms of flexible working already exist – reduced hours, compressed time, non-standard hours. A specific feature of remote working, however, is its direct and heavy dependence on information technology with important consequences for work intensification and labour processes (Kelliher and Anderson 2010). Teleworking arrangements may define formally in the manager-employee relationship, by written organizational policies and related procedures, or be based on informal arrangements might emerge in discussions. Different flexibility arrangements on how, when, and where the work is done have consequences for individual performance, employee attitudes, and the relationship between managers and employees (De Menezes and Kelliher 2017).

[2] *Control and sharing*. Sewell and Taskin (2015) identified spatial tensions between management and employees in teleworking that affect, influence, or control resources and people. They explored three specific dimensions of this tension: social space, territoriality, and “distantiation”. Along these lines, Nyberg and Sewell (2014) investigated the changing contours of control due to teleworking by focusing on the dynamics of collaboration, cooperation, and collusion in manager-employee dialectics and gave these terms precise definitions. *Collaboration* refers to an “illusory class compromise” (Wright 2000:957) where workers (mistakenly) believe that relationship is equal (Nyberg and Sewell 2014:310); *cooperation* is “an accommodation between management and employees that recognizes that the organization is a coalition of individuals and groups, each with their own aspirations and perceptions” (Fox 1974:250); and, *collusion* allows for “an accommodation of ends and interests, in which *cooperation* is an implicit transaction, containing elements of coercion, sanctions, genuine cooperation, and altruism” (Bensman and Gerve 1963:589).

In teleworking, the characteristics of the manager-employee relationship draw on a psychological contract that defines the sharing of responsibilities between the two parties (Jaakson and Kallaste 2010). This is a tacit agreement including expectations and obligations that are complementary to the formal written contract. Special attention is given to information and communication technology (ICT) costs and occupational health and safety (OHS) monitoring.

[3] *Employee well-being, support, and development.* Grant et al. (2013) examined the effect of teleworking along several dimensions: work-life balance, job effectiveness, and well-being. Viewed from this perspective, teleworking offers a potential solution the work-life dilemma because it affords greater flexibility, improves job productivity, and enhances employee performance. Remote working, however, may have adverse effects on the well-being of employees who require managerial support. Delving more deeply into these aspects of the manager-teleworker relationship, Collins et al. (2016) explored social support, defined as “verbal and nonverbal communication between receiver and provider that reduces uncertainty about a situation, oneself, another, or a relationship” (Sias 2009:70). They discussed three dimensions of social support: *instrumental*, providing the tools required to get the job done; *informational*, supplying useful information for completing the work; and *emotional*, offering empathetic listening as needed.

In addition to experiencing challenges to well-being that require tailored managerial support, teleworkers also face specific developmental obstacles. Butler (2016) points to the difficulty of knowledge transfer between managers and employees. Professionals must interact with other middle management individuals to share information, acquire new knowledge, enhance their grasp of key job aspects, and empower their profile.

Table 3.1 Research Topics

| Topic areas | Topics | Articles |
|--|--|---|
| <i>Teleworking hyper-flexibility</i> | Flexible work arrangements | De Menezes and Kelliher (2017) Kelliher and Anderson (2010) Spreitzer et al. (2017) |
| <i>Control and sharing</i> | Responsibility sharing | Jakkson and Kallaste (2010) |
| | Managerial control | Nyberg and Sewell (2014) Sewell and Taskin (2015) |
| <i>Employee well-being, support, and development</i> | Perceived social support in digital context | Collins et al. (2016) |
| | Work-life, well-being, and job effectiveness | Grant et al. (2016) |
| | Knowledge transfer | Butler (2016) |

3.2 Research tools

The manager-employee relationship in the context of teleworking, specifically regarding the above-noted topics, has been explored using several research designs (Table 3.2):

[1] *Literature review*. Based on a literature review, Spreitzer et al. (2017) explored “alternative work arrangement” research between 2007 and 2016. They analysed three dimensions of flexibility (*work scheduling, the location of work, and the way work is done*), focusing on differences between high-skill and low-skill workers. Over the last five years, and because of the coronavirus pandemic, nonstandard work has grown in importance, reinforcing the relevance of an overview of state-of-the-art research, the need to identify gaps, and the relevance of pointing out promising directions for future research.

[2] *Qualitative analyses*. Grant et al. (2013) used an exploratory design in an early attempt to understand the then new phenomenon of teleworking. Specifically, they explored the impact of remote work on work-life balance, performance, and well-being based on semi-structured interviews among public, private, and community sector teleworkers. Their questions probed for demographic details, job roles, the exact type of teleworking performed, how performance was measured, and the impact of virtual working on work-life and home-life balance.

Case study designs and semi-structured interviews have been widely employed in research exploring manager-employee relationships in the context of teleworking. Such techniques provide better access to the experiences of participants and their interpretations of teleworking. Jaakson and Kallaste (2010) studied shared responsibilities in teleworking relying on data from focus group interviews with employees from ten different organizational settings. In addition, human resource managers were interviewed in-depth to better understand standard policies.

Butler (2016) observed and interviewed teleworking accountants at varying career stages in the UK public sector, in their natural workplace environment. They were asked about professional background, changes due to ICTs and the impact of new technologies on their role, team, and organization (Butler 2016). Collins et al. (2016) collected data through interviews with supervisors, managers, office-based employees, and teleworkers. Participants were from departments (tax council, benefits, and community services development) in the UK public sector. They were asked to share their experiences on teleworking and on the relationship with the managers.

Semi-structured interviews with “hybrid working” employees from Information Technology (IT) and Research and Development (R&D) at BioPharma in Brussels formed a part of the data collected

by Sewell and Taskin (2015). Employees were asked about how their jobs were organized, how work changes were implemented, and the impact of teleworking on individuals. Key informants holding managerial positions were asked the same questions. Their research was conducted longitudinally, an important component that allowed them to explore changes over time.

Nyberg and Sewell (2014) also stressed the need for longitudinal data to better understand the manager-employee relationship. Their ethnographic study was conducted over eight months in three Australian call-centres. They collected data through participant observation, unstructured in-field interviews, and analyses of formal organizational documents. By observing and interacting spontaneously with individuals and adding official company information into the mix, the combination of data sources in their design allowed for the development of a rich and complex understanding of the dynamic of control and surveillance among organizational actors. It also addressed the issue of common method variance.

[3] *Quantitative analyses.* A cross-sectional correlational design allowed De Menezes and Kelliher (2017) to examine the relationship between flexible work arrangements and individual performance. A sample of professionals (n = 2617) from four multinational organizations (consulting, banking, utilities, and pharmaceutical) in the UK responded to an online survey. An Overall Job Satisfaction scale based on two items by Schneider et al. (2003) and nine items from Cook and Wall's British Organizational Commitment Scale (1980) was employed.

[4] *Mix-methods.* Kelliher and Anderson (2010) explored the experience of flexible employees, working from home, relying on 2066 responses to a questionnaire distributed to three different private sector organizations in UK and on fourteen in-depth interviews. They too used the Overall Job Satisfaction scale (two items from Schneider et al. 2003), British Organizational Commitment Scale (nine items from Cook and Wall 1980), and the Work-Related Stress tool (from Rose 2005). They asked questions regarding participant's role and their experiences with flexible working and changes to their jobs. Mix-method research designs can validate the relationship found between variables of interests in the quantitative analyses and provided further qualitative insights.

Table 3.2 Design and measure tools

| Design | Measure tools | Articles |
|-------------------------------------|---|---|
| <i>Literature review</i> | n/a | Spreitzer et al. (2017) |
| <i>Qualitative analyses</i> | | |
| Exploratory study | Semi-structured interviews | Grant et al. (2013) |
| Case-study | Semi-structured interviews | Butler (2016) Collins et al. (2016) Jaakson and Kallaste (2010) Sewell and Taskin (2015) |
| Longitudinal ethnographic study | Participant observations, unstructured in-field interviews, and analysis of formal organizational documents | Nyberg and Sewell (2014) |
| <i>Quantitative analyses</i> | | |
| Cross-sectional correlational study | Overall Job Satisfaction scale (Schneider et al. 2003) British Organizational Commitment Scale (Cook and Wall 1980) | De Menezes and Kelliher (2017) |
| <i>Mix-methods</i> | Overall Job Satisfaction scale (Schneider et al. 2003) British Organizational Commitment Scale (Cook and Wall 1980) Work-Related Stress (Rose 2005) semi-structured interviews | Kelliher and Anderson (2010) |

3.3 Findings

Teleworking and its underlying technologies have a considerable impact on the relationship between managers and employees.

To the extent to which teleworking permits more adaptable working schedules and offers the potential for a better work-life balance, *hyper-flexibility* tends to be the option favoured by employees. Studies have found that teleworking increases perceived employee engagement, lowers stress, fosters higher commitment, and enhances job satisfaction (De Menezes and Kelliher 2017; Spreitzer et al. 2017). Hyper-flexibility, however, reaches its limit in work intensification (Grant et al. 2013; Jaakson and Kallaste 2010; Kelliher and Anderson 2010; Nyberg and Sewell 2014; Spreitzer et al. 2017). In teleworking contexts, the pressure to meet client and manager expectations seems to increase constantly, accompanied by the need to be available, and to preserve social contact with managers (Kelliher and Anderson 2010; Spreitzer et al. 2017). Demonstrating one's

commitment is necessary for pay increases and promotions, but this requires extra energy, effort, and time that is visible to supervisors (Nyberg and Sewell 2014; Sewell and Taskin 2015).

Virtual telework is often accompanied by feelings of loneliness and limits the potential to develop a better relationship with supervisors. Some studies have found moderating or mediating variables that dampen teleworking's negative effects on employees: having the choice to work remotely or be stationed in-office, implementing flexible working arrangements through informal rather than formal human resource practices, and providing structured opportunities for nurturing good relationship with the managers (De Menezes and Kelliher 2017; Spreitzer and al. 2017).

The invisibility of teleworkers has been associated with a push by managers to increase surveillance powers, so regarding *control and sharing* in the manager-employee relationship, the former appears to dominate the latter (Sewell and Taskin 2015). Insofar as trust is based on visibility and presence, constant monitoring becomes a substitute for in-office visibility. Managers are often willing to trust teleworkers at the beginning of this new working arrangement, but that trust seems to decline over time. Managers are inclined to use quantification devices to control the amount of work being done as well as software access tools to monitor time spent on specific tasks (Nyberg and Sewell 2014). Sewell and Taskin (2015) reported the use of different control mechanisms in the organization they studied – alerts when individuals were exceeding allowing time, prior consent of manager prior to advancing on a project, electronic timesheets, restrictions on login accesses, and other traceability tools. Tight employee control produces more formalized manger-employee interactions (Butler 2016). Teleworker employee constantly fret about being mistrusted which could lead to a deterioration of their relationship with managers; this, in turn, generates pressure toward work intensification (Grant et al. 2013). As a strategy to maintain their formal relationship with managers, employees adjust their domestic-to-workplace time commitments, often to the detriment of a healthy work-life balance (Sewell and Taskin 2015).

Under teleworking arrangements, cost and responsibility *sharing* witnesses a shift from managers to employees, increasing the already existing asymmetry of that relationship. Jaakson and Kallaste (2010) found that most teleworkers pay for their own ICT furniture and equipment maintenance (computers, internet connection, peripherals) with no additional compensation. Even though required by law to do so, managers do not routinely implement measures for monitoring the health and safety of teleworkers. Managerial tactics may give employees the illusory perception of not being controlled. Conversely, Nyberg and Sewell (2014) found real limitations on managerial control when teleworkers are unionized. Overall, asymmetric power is intensified for teleworkers as the latter submit to managerial control and unfair sharing.

The balance between benefits and detrimental consequences depends heavily on *managerial support for the well-being and development* of teleworkers. Remote work does make it challenging for managers to provide employee support through the intense adaptation of traditional, in-office supportive practices (Collins et al. 2016; Grant et al. 2013). Managers must establish meaningful relationships with employees. Many teleworkers miss face-to-face contacts, so monthly home visits by their managers can keep social contact alive. By providing emotional support to employees, managers can foster deeper commitment. Supervising teleworkers appears to require more emotional involvement than regular work arrangements in providing support to employees. When a remote worker experiences personal difficulties and the job cannot be performed according to expectations, managers require explanations involving more disclosure than is the case for office-based counterparts.

In the teleworking context, limited social interactions with managers and colleagues have consequences for knowledge transfer. Butler (2016) found that ICTs allow for abstract knowledge to be conveyed to others in a dynamic and comprehensive way. At the same time, using ICTs increases asymmetry in the manager-employee relationship allowing managers collect knowledge from employees which they do not transfer to other employees. Managers tend to give more tasks to office-based employees, affording them more opportunities to gain empowering knowledge, but this leaves teleworkers behind in developmental opportunities for career advancement.

The manager-employee relationship in the world of virtual, remote, distant teleworking provides supervisors many opportunities to extend control over subordinates. This creates an even more asymmetric power dynamic, placing employees under new and significant pressures. Managers could adapt supportive practices to build, nurture, and embed trust in their interactions with employees, with potential benefits for both parties.

3.4 Contributions

The above-cited findings provide insights for improving future research and for developing labour force and employment policies.

3.4.1 Academic contributions

The academic contributions of the literature fall into three broad categories:

[1] *Frameworks for studying the manager-employee relationship in teleworking.* Both Nyberg and Sewell (2014) and Sewell and Taskin (2015) provide a comprehensive framework for exploring resistance, control, and compromise in the teleworking environment. The application of geographical concepts (spatiotemporal scaling, distantiation, and territoriality) offers a new approach for investigating the manager-employee relation in the hybrid, office-based and teleworking working arrangements workplaces. Spreitzer et al. (2017) analysed teleworking hyperflexibility along three core analytical dimensions: *employment relationship, scheduling of work, and where the work is realized*. They introduced concepts, such as protean and boundaryless career, referring to “a self-direct approach to career management and a values-driven career orientation that is meaningful and purposeful” (Spreitzer et al. 2017:492). Grant et al. (2013) explored the impact of remote working on the psychological contract, well-being, job effectiveness, and work-life balance which highlighted a number of manager-employee themes emerging from the exploration of teleworking.

Overall, through the enrichment of these frameworks for the study of manager-employee relations in teleworking, the implications of manager-employee (a)symmetry become clearer, pointing the way for future studies (Sewell and Taskin 2015).

[2] *Reconceptualising the employment relationship.* Kelliher and Anderson (2010) argued for *problematizing* the management-employee relationship in teleworking, highlighting how, paradoxically, hyper-flexible work arrangements can have both beneficial and detrimental outcomes for employees, the principal example being work intensification. Collins et al. (2016) suggest several strategies for preventing teleworking’s adverse effects and ways to avoid detrimental consequences for the organization and the employee.

Proper assessment of the results of teleworking research must consider benefits well as costs from the point of view of employees as well as that of organisations.

[3] *Mechanisms in the manager-employee relationship specific to teleworking.* De Menezes and Kelliher (2017) highlight the importance of *specific mechanisms at play* in shaping the manager-employee relationship in the context of teleworking, contributing to the understanding of the impact of “individualization” in that relationship. Informal manager-employee working arrangements are a significant new line of inquiry because they complement, bend, or diminish formal regulations. There is a clear positive relation between informalization in working arrangements and employee satisfaction. This evidence calls into question the effectiveness of certain formal and burdensome human resource management policies and practices. Jaakson and Kallaste (2010) note that in

addition to the impact of informal arrangements, managerial social support is another key mechanism in defining the employment relation for remote teleworking. Employees demand flexibility, but are willing to accept more responsibilities, making the deleterious consequences of teleworking a constantly possible. Analytically, it becomes important to focus on the psychological contract between supervisor and workers. Managers may exploit such requests and exert technologically enabled controls instead of supporting employees in the challenging circumstances of teleworking. Finally, Butler (2016) views knowledge transfer between manager and employees as a fundamental, but underexplored, aspect of teleworking that can provide vital information about empowerment (and its limitations) in negotiating the boundaries of control between employees and managers.

3.4.2 Policy implications

Organizational policies

Three policy themes emerge from this literature review of teleworking: (1) these arrangement and types of jobs do not “liberate” organisations from their responsibilities toward these employees; (2) employee autonomy still requires managerial oversight; and (3) the employment relationship should not be considered a technology-only, or even a technology-led, interaction. Scientific research has highlighted that teleworking can have notable adverse impacts. Human resources policies must be sensitive to, and be designed specifically to shape, teleworking if there is to be an efficient, effective, and equitable manager-employee relationship.

First, front and centre, managers, especially immediate supervisors, must promote and constantly foster relationships of trust with employees (Grant et al. 2013). Communications – through informal manager-employee meetings and by means of a constant flow of communications – must be prioritised to nurture good relations, avoid isolation, and respond to the needs of employees (Grant et al. 2013). To achieve these goals, periodic face-to-face meetings appear to be better suited than constantly relying on technology-mediated interactions (Butler 2016).

Second, the “invisibility” of teleworkers constantly threatens to weaken their connection to the organisation. Consequently, more than for in-office settings, managers must reinforce the employee psychological contract, especially by manifesting their support to teleworkers (Grant et al. 2013; Sewell and Taskin 2015; Spreitzer et al. 2017). As a start, managers should be concerned with the health, safety, and well-being of employees at remote workplaces (Jaakson and Kallaste 2010). Managerial support is central for knowledge transfer among employees to promote their

knowledge, empower them, enhance career progression, and for the success of the organisation (Butler 2016).

Finally, a third organizational policy area needs to consider employee voice. Managers should give employees opportunities to discuss workloads, clarify ambiguities, elucidate goals and expectations (Grant et al. 2013).

When employees participate in defining the specific characteristics of their workload and flexibility required for their teleworking arrangements, human resources policies can be designed that will enhance the organisational efficiencies associated to this type of employment (De Menezes and Kelliher 2017). Further, allowing and encouraging informal agreements regarding teleworking arrangements between managers and employees enhances performance better than formal rules and regulations. Of course, a cautionary note is in order: too heavy a dependence on informal practices might raise organisational social justice issues.

Trade union policies

The existing scientific literature on manager-employee relations in the context of teleworking has not dealt directly with trade union issues. Nonetheless, the dynamics of teleworking can be aligned with an industrial relations perspective to suggest possible union policies for this sector.

Employment conditions in teleworking depend on a fragile balance between its beneficial and adverse aspects. On the positive side, there are: (a) flexibility in work schedule and (home) location (Spreitzer et al. 2017); (b) sidestepping toxic work environments (Sewell and Taskin 2015); (c) greater autonomy and job satisfaction (De Menezes and Kelliher 2017; Spreitzer et al. 2017). Negative features include: (a) having the teleworking arrangement imposed on employees (De Menezes and Kelliher 2017); (b) pressure on employees to accept massive work intensification (Kelliher and Anderson 2010); and (c) significant increases in the manager-employee power asymmetry (Kelliher and Anderson 2010).

Along these lines, then, from a labour and industrial relations perspective, potential union strategies and employment protection legislation might include:

- 1) pushing for teleworking as an employee and not employer choice
- 2) ensuring that employees retain the right to grieve against excessive managerial control and abusive surveillance

- 3) securing workplace voice channels for employee to discuss, define, and share workload responsibilities with managers
- 4) promoting opportunities for employee empowerment through knowledge sharing
- 5) arguing against workplace traps that isolate teleworkers, minimise their tasks, reduce their ability to share and acquire knowledge, and block career advancement.

3.5 Research gaps and avenues for future research

Three identifiable gaps in the current literature that point the way forward for future research on the manager-employee relationship in teleworking arrangements have been highlighted in this report:

[1] *Evolution of trends.* Almost all the extant literature on the impact of teleworking on manager-employee relations is cross-sectional. The highlighted consequences need to be subjected to the test of time regarding the longitudinal *evolution of trends*. Work intensification was found to have deleterious consequences for (most) remote workers. Even though teleworking is a relatively new flexible working arrangement, further research on the long-term effects of remote working arrangements is required to ascertain if these negative effects diminish, remain an integral part of this working system, or increase over time (Kelliher and Anderson 2010). Quantitative and qualitative panel data or repeated surveys among teleworkers across several sectors and firms would fill this lacuna.

[2] *Underlying specific mechanisms.* Explorative case studies have indicated how teleworking affects the manager-employee relationship, but little is known about the *specific mechanisms* that underlie it. First, there are limited comparisons on how variations in contextual characteristics (firm size, sector, activity, work climate, and organisational culture) affect the manager-employee relationship among teleworkers (De Menezes and Kelliher 2017; Jaakson and Kallaste 2010). Butler (2016) did indicate that mechanisms for knowledge transfer vary across sectors and business activities. There is no generalisable knowledge about the conditions under which the manager-employee relationships in the teleworking environment assume one specific form rather than another (i.e., supportive or abusive).

Future research should explore and validate the determinants of managerial competencies for supporting teleworking employees (Collins et al. 2016; Grant et al. 2013). Exploratory qualitative analyses on the effects of specific mechanisms can refine existing measures and adapt them to the

teleworking context. Such results can guide more structured, empirically sound, and generalisable quantitative and mix-methods efforts across different organisational and institutional settings.

[3] *Best practices*. Another aspect of research on the manager-employee relationship in the context of teleworking should provide clearer managerial guidelines and suggest preventive policies against detrimental effects and for the implementation of *best practices* (Grant et al. 2013). Intensive managerial control presents itself as a factor that undermines trust in the manager-employee relationship. The deployment of practices establishing a solid psychological contract for teleworkers is therefore suggested (Sewell and Taskin 2014). Analyses of the effect of experimental implementation of best practices across organisations could help overcome this limitation.

4 Colleague-to-colleague relationship

4.1 Topics

Teleworking arrangements are not only bringing about changes to the manager-to-employee relationship, but they are also having a profound impact on the colleague-to-colleague, peer-to-peer relationship as well. The relationship among colleagues underpins the development of worker solidarity, allows workers to create a sense of “collective” interests, and serves as a springboard for organizing, bargaining, and work actions. The extant employment relations and cognate discipline literature, however, contains little direct research on peer-to-peer relations in context of teleworking. Some research has dealt with the factors associated with, and the consequences of, teleworking on relations among colleagues (Table 4.1).

Three themes have been considered in these attempts:

[1] *Relationship building*. Building and maintaining relationships among colleagues in the context of teleworking is particularly hard insofar as remote workers may be “invisible” to colleagues. Fay and Kline (2011) surveyed teleworkers, exploring how communication practices among colleagues affect organizational commitment, job satisfaction, and “liking” remote co-workers. Drawing on earlier research (McManus and Russell 2007), they contend that co-worker friendships serve multiple roles: mentoring, information exchange, influencing colleagues, facilitating innovation, and providing social support. Importantly, these functions appear to be best served at higher levels of interaction, trust, and self-disclosure. Traditional on-site, side-by-side work arrangements often pave the way for colleague-to-colleague relationships. Schinoff et al. (2020) studied how teleworking affects the development of friendships through virtual “interdependent working relationship”. By exploring *relational cadence* (“perceived convergence in the patterns of interaction between one specific worker and a particular co-worker”), they distinguished between *work-related cadence* (“convergence in the patterns of work-related interaction”) and *friendship-related cadence* (“convergence in the patterns of personal interaction”) (Schinoff et al. 2020:1396-1397).

[2] *Peer control*. Teleworking provides managers with opportunities to increase control over employees. Such control also becomes possible in peer-to-peer relations. Advanced information and communications technologies make the performance of remote colleagues “visible”, even if these co-workers remain “invisible”. The work intensification fostered by teleworking increases

the need to be visible to the supervisor to progress in one’s career. Sewell and Taskin (2015) noted that these two elements make colleague-to-colleague control and surveillance a relevant issue in studying teleworking.

[3] *Peer support*. Importantly, and at the other extreme of the continuum, for isolated teleworkers, *support* from colleagues has been shown to be a necessary condition for individuals to identify with an organization. Collins et al. (2016) analysed three dimensions of social support – *emotional*, *informational*, and *instrumental*. Specifically, they investigated the impact of teleworking on the support relationship among co-workers, distinguishing between different working arrangements, such as among teleworking colleagues or between teleworking and office-based colleagues.

Table 2.1 Research Topics

| Topics | Articles |
|-----------------------|--|
| Relationship building | Fay and Kline (2011) Schinoff et al. (2020) |
| Peer control | Sewell and Taskin (2015) |
| Peer support | Collins et al. (2016) |

4.2 Research tools

Both qualitative and quantitative methodologies have been used to study how teleworking affects different dimensions of the colleague-to-colleague relationship (Table 4.2).

[1] *Qualitative approaches*. Case studies provide important insights into the web of relationships among teleworkers and their working lives. Sewell and Taskin (2015) used semi-structured interviews to explore the impact of teleworking with special emphasis on interactions with colleagues. Their qualitative sample constituted of 17 employees working in-office or remotely for the IT and R&D departments of a pharmaceutical company in Brussels. Collins et al. (2016) also collected their data by semi-structured interviews with 12 office-based employees and 13 remotely located teleworkers, from three departments (tax, benefit, and community services) in the UK public sector. The researchers solicited narratives of personal experiences regarding interactions with colleagues, specifically in terms of “feeling supported”. They distinguished between colleagues having the same or different work arrangements. Using a grounded theory approach, Schinoff et al. (2020) collected evidence on colleague-to-colleague interdependencies and the formation of virtual friendships from a US-based global technology corporation. The 64 teleworking participants were asked about the circumstances leading to the formation of virtual

friendships among remote colleagues and the extent to which these associations developed. An important innovation in this case study was the timing of interviews: 36 employees were interviewed only once, while 28 were interviewed three times. This longitudinal dimension allowed for tracking changes over time in relationship building and friendship formation among teleworkers.

[2] *Quantitative approaches.* Fay and Kline (2011) used a cross-sectional correlation design to explore how relationships among teleworkers moderate the effects of communication practices, placing special emphasis on organizational commitment and job satisfaction. They relied on several validated scales: informal communications practices (Holmes 2000), an organizational commitment questionnaire (Mowday et al. 1979), job description index for job satisfaction (Smith et al. 1969), and the “liking scale” (Rubin 1970) for co-worker liking.

Table 4.2 Design and measure tools

| Design | Measure tools | Articles |
|-------------------------------------|--|---|
| <i>Qualitative</i> | | |
| Case-study | Semi-structured interviews | Collins et al. (2016) Sewell and Taskin (2015) |
| Longitudinal exploratory study | Semi-structured interviews | Schinoff et al. (2020) |
| <i>Quantitative</i> | | |
| Cross sectional correlational study | Informal communications practices (Holmes, 2000) Organizational Commitment Questionnaire (Mowday et al. 1979) Job Description Index (Smith et al. 1969) Liking Scale (Rubin 1970) | Fay and Kline (2011) |

4.3 Findings

To date, the extent of the debate on colleague-to-colleague work relations is limited. Nonetheless, this literature contains a richness of findings that provide insights into the effects of teleworking on peer-to-peer interactions with important implications.

[1] *Relationship building.* In the world of teleworking, there is a ubiquitous reliance on technology that virtually eliminates in-person interactions among colleagues. Further, working schedules are

individualized and asynchronous rather than the regular and collective. Schinoff et al. (2020) documented how these factors create barriers to relationship formation among remote-working colleagues. In addition, in that environment, opportunities to share experiences (especially over extended periods of time) are scarce. During the few opportunities for interaction that arise, formality prevails over familiarity, generating “stand-alone” feelings of among teleworking peers. A sense of the collective among teleworking colleagues is practically non-existent and it is hard to nurture opportunities for its development. Interestingly, Fay and Kline (2011) found significant positive effects on job commitment and job satisfaction when teleworkers “like” their colleagues. *Co-worker liking* appears to develop through informal communications among colleagues. Along the same lines, Schinoff et al. (2020) noted that *relational cadence* becomes central to understand changes in colleague-to-colleague relationships. Patterns of temporal and topic interactions operate to change the boundaries of relationship – from *work-related* to *friendship*. Simple teleworking relationships with colleagues can morph over time into a multiplex interaction. It seems that formal work-related discussion topics only give life to shallow relationships. Stronger bonds can be established when teleworkers share complaints about organizational dynamics (Fay and Kline 2011). Over time, if topic boundaries are pushed into personal space, friendships can emerge (Schinoff et al. 2020). Teleworking employees build relationships based on work dynamics, but they bond based on sharing common grievances and personal experiences.

[2] *Peer control*. Sewell and Taskin (2015) found that teleworking arrangements increase control and surveillance by managers over employees, and among colleagues. Working in the realm of “invisibility”, remote workers explore monitoring technologies that make the performance of their colleagues “evident”. This, in turn, augments the propensity to engage in, and intensity of, peer surveillance. Technology-enabled tools for controlling performance include speeding up logins, monitoring usage statistics, measuring response times for inquiries, and soliciting quick meetings. In addition, many remote workers make their availability “visible” beyond the working hours to demonstrate to their colleagues (and supervisors) that they are fully committed to their jobs and to the organization. Individuals may choose to telework to avoid noise and interruptions and for its freedom and calm. Paradoxically, they often get caught in an upward spiral of formal communications, meetings, and *impromptu* interactions, placing them under constant peer control and increasing stress levels.

[3] *Peer support*. Collins et al. (2016) found that peer support is essential for successful teleworking arrangements. Their evidence suggests that teleworkers develop greater social support with other teleworkers rather than with office-based colleagues. It is important to note that among teleworkers,

supportive relationships were established primarily through in-person, in-office interactions before these employees shifted to teleworking arrangements. Social disconnections between office-based and teleworking employees create fissures that diminish opportunities for developing feelings of being part of the same collectivity. Teleworking makes building and nurturing colleague-to-colleague relationships extremely challenging. Nonetheless, the teleworking environment does provide some opportunities to develop strong bonds among colleagues. The latter, however, are on a personal, one-to-one level rather than reflecting a sense of collective consciousness.

4.4 Contributions

A limited number of research-based contributions on teleworking and remote working arrangements highlight the difficulty in establishing meaningful colleague-to-colleague relationships. These efforts, however, have already provided significant insights and knowledge about this aspect of teleworking. Consequently, they contain insights and knowledge that can inform organizational policies. Even though none of the cited literature directly tackled industrial relations issues, their findings have important implications for trade unions as well.

4.4.1 Academic contributions

There are two areas in which the current literature has made significant contributions:

[1] *Framework enhancements*. Collins et al. (2016) dissected the complexity of social relations in remote versus office-based workplaces and provided a useful typology of possible forms of support by colleagues. Sewell and Taskin (2015) demonstrated how spatiotemporal scaling and distanciation are fruitful concepts for investigating colleague-to-colleague relationship. They were able to tease out surveillance and control dynamics involving peers not just supervisors. Finally, Schinoff et al. (2020) developed and validated a “relation cadence” framework in a study of bond formation and friendship building and among teleworkers.

[2] *Empirical results*. Even though principally exploratory, the highlighted research nonetheless produced important empirical findings. Schinoff et al. (2020) showed how teleworking hampers relationship building among colleagues. While it may appear paradoxical, a trio of studies illustrated that even more than for employees in office-based arrangements, employee performance and well-being outcomes, among teleworkers the characteristics of colleague-to-colleague

relationships are relevant predictors (Collins et al. 2016; Fay and Kline 2011; Sewell and Taskin 2015).

4.4.2 Policy implications

Organisational policies

Teleworking hampers the formation and nurturing of most colleague-to-colleague relationships. Consequently, human resource management policies should be sensitive to this and implement processes and procedures to provide structured and informal opportunities allowing remote teleworkers to engage in collegial interactions.

First, following Fay and Kline (2011), based on knowledge sharing, trust enhancement, and employee commitment, organizations should support colleague-to-colleague relationship building. Creating communication spaces should go beyond formal meetings bounded by work-related topics. Informal communications and social events among colleagues have been demonstrated as important determinants of positive organizational outcomes, so opportunities for developing them should be a priority. In organizations that have both office-based and teleworking employees, mechanisms should be fashioned to facilitate relationship-building across the two groups. Newly hired individuals, who will do exclusively teleworking, need to have dedicated on-boarding programs that address these issues, especially insofar as such employees cannot leverage pre-existing, office-developed relationships with co-workers (Fay and Kline 2011).

Second, organizational policies should not become obstacles or deterrents for teleworkers in building and developing colleague-to-colleague relationships. Invasive peer surveillance should be curtailed. The culture of visibly, of “always being available” needs to be discouraged. Surveillance-free spaces should be shaped where employees can discuss not only work assignments but also work-related complaints and personal matters during working hours (Fay and Kline 2011; Sewell and Taskin 2015).

Finally, to foster peer relationships over time, managers should be trained to stimulate routine interactions among employees that allow them to be nurtured over time. In addition to knowing and engaging in sound practices, managers should be monitored for their emotional intelligence, be able to seize opportunities to remove deterrents to colleague-to-colleague relationships and be able to provide ad-hoc networking opportunities, especially across clusters of already existing relationships (Fay and Kline 2011). Otherwise, in context of full-time teleworking, social relations

tend to diminish, remote workers begin to feel isolated, and organisational performance will decrease (Collins et al. 2016).

Union policies

Specific union policies were not the focus of any of the research highlighted in this synthesis. The findings of those works, however, have important implications for industrial relations. Unions are collective actors, so their effective activities to consolidate a dense network of relationships among co-workers can be used as a springboard to consolidate and enhance their power.

In the context of teleworking, therefore, union must explore at least the following three types of strategies:

- 1) mapping the characteristics of the network of relationships and bonds among co-workers
- 2) overcoming sharp cleavages among isolated clusters of relationships (office-based and remote workers, teleworkers hired as such versus those having pre-established, office-based relationships)
- 3) identifying bridge-builders who can create collegial networking opportunities and weave them across different types and clusters of relationships.

4.5 Research gaps and future avenues

Three gaps that indicate potential directions for future research emerged in the study of colleague-to-colleague relationships in teleworking arrangements:

[1] *Testing generalizability*. The studies by Collins et al (2016), Sewell and Taskin (2015) and Schinoff et al. (2020) were all exploratory in terms of the effect of teleworking on colleague-to-colleague relationships. Even though Fay and Kline (2011) deployed a quantitative approach, its correlational research design could not be used to establish causal relations. To overcome these lacunae, the results need to be tested on different cases, refined operationalization of effects must be incorporated in the designs, and panel data should be collected to address temporal effects. Fay and Kline (2011) noted that collecting data by means of a diary method can also provide longitudinal and more robust insights concerning informal communications among teleworkers and their effects on organizational dynamics.

[2] *Framework empowerment.* A network analysis approach would enhance the framework used to study colleague-to-colleague relationships in teleworking arrangements by providing a more complete set of analytical dimensions along which to characterize interactions among colleagues and their evolution over time. It would also provide tools to analyse systemically networks of relationship types in different organizational contexts. This would allow for the identification of communication-leaders and bridge-builders whose roles in limiting the adverse consequences of teleworking on relationships among colleagues could be of fundamental importance both for the organization and for trade unions.

[3] *Implications for union and state policies.* There are even fewer direct suggestions in the literature reviewed for this synthesis for union and public policies than there were for management and organizations. More applied research on teleworking's effect on colleague-to-colleague relationship would, of course, generate practical suggestions as well, especially if policy development is its explicit goal. In addition, the mobilization of core industrial relations analytical frameworks can provide more beneficial knowledge to trade unions that would also enrich public policy debates about trends in the labour market and employment systems.

5 Union-to-employer relationship

5.1 Topics

Teleworking arrangements have a profound impact on the classic industrial relations interaction – the one between unions and employers. The literature reviewed for this synthesis analysed two core aspects in this regard: [1] *organizing*, focusing on the challenges that digitalized management methods, crowd-sourced labour, and flexible telework arrangements pose for shaping worker identity, grievances, and interest in collective representation; and [2] *negotiating*, emphasising the role of unions for improving employment conditions under this new working arrangement – at the employer, national, and international levels (Table 5.1).

[1] *Organizing*. There is a considerable body of research that has explored how and why union organizing is being altered by non-traditional and especially by software-mediated work arrangements. Studies have drawn on the core concepts of labour process theory and applied them to workplaces and industries whose work arrangements are becoming increasingly scattered, flexible, and technologically mediated. Information and communications technologies (ICTs) provide management with a powerful tool for cutting and controlling costs in a way that obscures surplus profit and allows management to function with invisibility. In addition, among employees, ICTs generate a form of possessive individualism. Chai and Scully (2019), Holtgrewe (2014), and Maffie (2020) have employed variants of this framework to interpret the challenges of teleworking for trade union organizing drives. Wirsig and Compton (2017) remind us that technological advances have historically substituted for and displaced labour, and that labour will generally continue to be outweighed by technology.

Holtgrewe (2014) and Wirsig and Compton (2017) focused predominantly on the challenges that the non-standard "liquid" employment, and the virtual workplaces made possible by ICT-based innovations, create for union organizing. Interestingly, the same technology has been credited with facilitating the formation of long-term bonds among digitally dispersed gig workers. Holtgrewe (2014) and Maffie (2020) demonstrated that online platforms can be used to build collective identity among crowdsourced workers. "Web 2.0", "flexible firms," and "Talent Clouds" have been used to foster unionization in creative media (Wirsig and Compton 2017) and ride-hail industries (Maffie 2020) in North America.

[2] *Negotiating*. How union bargaining power affects the employment conditions of digitally dispersed work has also been extensively studied. Research on this aspect have generally been conducted at the national level, highlighting the effect of workplace characteristics. Cappelli and Keller (2013) tried to ascertain whether non-standard employment arrangements, such as teleworking, had a positive or negative correlation with union presence. Berg et al. (2014) examined the extent to which union presence, union contracts, union pay benefits, and union-bargained scheduling increased the likelihood of workers gaining access to greater flexibility, including teleworking. Bryson et al. (2013) investigated whether the presence of unions can moderate the implementation of new working arrangements and how employees experienced such changes in terms of anxiety and satisfaction. Cortis and Powell (2018) expanded on the anxiety theme by analysing individual and organizational factors that drive middle-level managers to spend personal time to accomplish their workload remotely, after the end of the office-based workday.

The examination of the supranational impact of unions on teleworking employment relations shows how they can affect job conditions in ways that transcend sectoral and national boundaries. Prosser (2011) and Larsen and Anderson (2007) studied the first international and intersectoral framework agreement dealing with teleworking in various European Union countries. In the context of Europeanization of employment relations, they highlighted the power struggle around telework that exists between unions, employers, and the governments. Prosser (2011) provides guidelines for the appraisal of effective implementation of that framework agreement.

Table 5.1 Research Topics

| Topic areas | Topics | Articles |
|--------------------|---|---|
| <i>Organizing</i> | ICT-based liquid employment and capacity for collective organizing | Holtgrewe (2014) Wirsig and Compton (2017) |
| | Online platforms and gig worker organizing | Maffie (2020) |
| <i>Negotiating</i> | Union influence on alternative work arrangements and work design | Cappelli and Keller (2013) Eisele and Schneider (2020) |
| | Unions and support for flexible work practices | Berg et al. (2014) |
| | Personal and organisational factors associated with supplementary work | Cortis and Powell (2018) |
| | Role of unions on worker well-being during organizational change | Bryson et al. (2013) |
| | European social dialogue and the implementation of telework agreements in EU member states. | Larsen and Anderson (2007) Prosser (2015) |

5.2 Research design and tools

Research designs used to study union-employer relations in the context of teleworking have included four main approaches (Table 5.2):

[1] *Literature review.* Contributions based on literature reviews take an in-depth look at developments in new digital technology and the way in which they rapidly restructure work and influence union organizing policies and practices. The reasoning of these arguments is made more sound by referring to descriptive data trends. Holtgrewe (2014) did so by presenting sector-level technology forecasts from the European Union and the OECD. Wirsig and Compton (2017), instead, used data on production workers, freelance workers, and content creators from the Canadian Media Guild.

[2] *Qualitative empirical contributions.* Lasser and Anderson (2007) interviewed 16 representatives from national ministries, trade unions and employers' associations across Europe to produce a detailed examination of negotiations among European social partners regarding the implementation of EU telework agreements. They conducted 125 interviews with sectoral-level representatives from five European countries: Denmark, Germany, Sweden, Hungary, and the United Kingdom. Prosser (2011) drew on cross-sectional descriptive data and original semi-structured interviews to synthesize past and contemporary debates about European social dialogue and to outline appropriate benchmarks for appraising "effective" implementation of the teleworking international agreements in Europe.

[3] *Quantitative empirical contributions.* Longitudinal workplace surveys provide important insights into the effect of trade unions on teleworking. Using data from 1,238 British private sector organizations (13,500 employees) from the Workplace Employment Relations Survey (WERS), Bryson et al. (2013) conducted a multivariate analysis to test the moderating effect of unions on the relationship among organizational changes, remote working, and worker well-being.

Using OLS regressions fixed effects estimation, Eisele and Schneider (2020) analysed four waves (1997, 2001, 2006, and 2012) of the UK "Skills and Employment Survey (SES)" to explore the effect of unions on work design. Their representative sample was composed of 14,270 respondents,

aged 20 to 60, who were employed in major unionized industries and occupations. Cappelli and Keller (2013) explored three waves of the National Employment Surveys (NES I, NES II and NES III) to examine the extent to which unions influence the presence of alternative employment arrangements in the USA. This study was limited to private sector establishments with more than 20 employees. In Australia, Cortis and Powell (2018) estimated the odds of performing supplementary work at home (after office-based working hours and with no additional compensation), based on data from the Public Service Employees Census (2014). While the sample was not nationally representative of the workforce, the analysis revealed several relevant factors – management and leadership information, job security, job tasks, personal confidence with technology.

[4] *Mixed-method empirical studies.* To measure the impact of individual and collective voice mechanisms on flexible work practices and to understanding the negotiation and implementation of flexible working arrangements, Berg et al. (2014) analysed 897 survey responses of individuals in major unionized industries across the USA and interviewed 162 managers, supervisors, and local union officials. The data were stratified by department and occupation and tested against whether respondents had access to or used any of six distinct measures of flexible work.

Maffie (2020) used a mixed method approach to examine the influence of social networking sites (SNS) on workers' views on unions and the willingness to organizing in a union-like association. For three months, the researcher engaged in virtual exchanges with five ride hail driver Facebook groups in the American Midwest. Topics included experiences in the industry, the instrumentality of Facebook groups, and relationships among drivers. In addition, the study incorporated survey responses from 450 ride hail drivers across the USA as well as interview data. Structural equation modelling was used to estimate how the dependent variables (interest in organizing and perception of union instrumentality) were associated with social interaction (frequency of text messaging, social media exchanges, or in person contacts) and conflict (frequency of complaint filings with the rideshare company over passenger behaviour, charging clean-up fees due to passenger damages, attempts by passengers to exceed the legal passenger limit by "squeezing" more riders into the vehicle).

Table 5.2 Research design and tools

| Design | Tools | Articles |
|--------------------------|--|---|
| <i>Literature review</i> | n/a | Holtgrewe (2014) Wirsig and Compton (2017) |
| <i>Qualitative</i> | Semi-structured interviews | Lasser and Anderson (2007) |
| | Semi-structured interviews | Prosser (2011) |
| <i>Quantitative</i> | Cross-sectional correlational study Measures in WERS: job anxiety (Warr 2007: anxiety contentment) job satisfaction (Warr 2007: pleasure displeasure concept of subjective well-being) organizational change (original scale) organizational changes in labour practices (original scale) union coverage (presence of one or more unions) union or consultative committee involvement in the introduction and implementation of organizational change (original scale) | Bryson et al. (2013) |
| | Pooled cross-sectional study; source “Skills and Employment Survey” (SES) | Eisele and Schneider (2020) |
| | Cross sectional and longitudinal study; source National Employer Survey | Cappelli and Keller (2013). |
| | Cross-sectional correlational study: Australian Public Service Employee Census | Cortis and Powell (2018) |
| <i>Mixed methods</i> | Measures: Flexible work (whether one has access to or use of six flexible scheduling practices) Semi-structured interviews | Berg et al. (2014) |
| | Union Instrumentality Scale (David and Shipper, 1993, modified) – modified; social interactions scale (original); Conflict Scale (original). Virtual semi-structured interviews and observation | Maffie (2020) |

5.3 Findings

Organizing. The extant literature clearly demonstrates the challenges in organizing scattered, tech-mediated workplaces and the weakness of union attempts to do so. ICTs can act as catalyst and perpetuator of individualism among workers whose earnings are the result of digitally mediated endeavours. Wirsig and Compton (2017) found that in addition to online influencers and social media content, the invisibility of supervisors/managers, as well as the virtually dispersion of teleworkers exacerbated a tendency to not identify as “workers”. Along these lines, based on exploratory findings from 46 interviews with media freelancers, Holtgrewe (2014) noted that by continually taking advantage of new technological features being incorporated into online platforms, individuals developed an entrepreneurial outlook, the opposite of traditional union collective identity. New ICTs also advance a generational conflict narrative between young, tech-literate workers and their senior, less tech savvy colleagues. This shifts the focus away from the management-employees cleavage. When the shared interests of workers are undermined, solidarity is stifled and organizing collective actions becomes more difficult (Holtgrewe 2014; Wirsig and Compton 2017).

Notwithstanding these obstacles, strikes by online-platform teleworkers and a rise in unions among freelancers in North America suggest that the digitally dispersed “liquid employment” workforce is potentially and increasingly open to organised collective behaviour. Online communication platforms have been shown to generate a sense of solidarity and to facilitate the growth of union membership among digitally dispersed employees (Wirsig and Compton 2017; Maffie 2020). More frequent interactions with other drivers in online communities and conflict between drivers and customers are both associated with favourable views of union instrumentality and interest in joining union-like, ride hail driver associations.

Negotiating. There is a long-standing debate on the role of unions in influencing the nature and design of work, including non-standard work arrangements such as teleworking. Cappelli and Keller (2013) found that unions have a significant negative correlation with the use of nonstandard work arrangements, including teleworking. Considering union presence as a potential factor in shaping how work is designed under new technological arrangements, Eisele and Schneider (2020) found that union presence is associated with more Tayloristic job arrangements, more managerial control, less autonomy, reduced task variety, and a lower emphasis on problem-solving skills. While managers consider unions to be a threat and design jobs in a more Tayloristic fashion to curb

union power, these deployment strategies also limit the potential benefit of advanced digital technologies.

Apart from non-standard employment arrangements and work design, collective voice measures and union negotiations are also related to the use of work-life flexibility practices (Berg et al. 2014). When workers perceived unions as being effective in supporting their scheduling needs, access to more flexible working arrangements increased. When workers perceive unions to be effective only negotiating higher wages and benefits and enforcing collective agreements, worker access to and use of flex time and compressed workweek was lower. The highest effect of unions on workers' usage of flexible arrangements was found when these practices were negotiated and incorporated into collective bargaining agreements. Similarly, in Australia, in a context of low organizational work-life balance and without unions, Cortis and Powell (2018) showed that some organizational practices (time pressure, under-classification of employees, changing priorities) push middle managers, especially women with care responsibilities, to do supplementary, home-based, and unpaid work. Bryson et al. (2013) also found that organizational changes are positively related to the level of job anxiety felt by workers. This effect, however, disappears when employees targeted by the organizational changes were unionized. Highlighting measures to overcome the structural limitations of unions in organizing teleworkers, Lasser and Anderson (2007) noted that the positive effects of workplace level negotiations can be enhanced through international or global framework agreements (IFA, GFA) requiring international negotiations aimed at protecting all teleworkers. Prosser (2011) found, however, that the extent of implementation of these agreements depends heavily on national systems of industrial relations, i.e., coordinated systems have more power to execute them.

5.4 Contributions

5.4.1 Academic contributions

[1] *Framework*. By reconceptualising the employment relationship and updating the analytical tools used to study it, research on teleworking arrangements have had a profound impact on traditional industrial relations. The benchmark for future research must be sensitive to (a) the hampering and facilitating aspects of teleworking for union organizing, (b) specific issues for union bargaining strategies at workplace and higher levels, (c) the emerging importance of international framework agreements as a frame of reference for non-traditional employment arrangements.

[2] *Empirical*. For the most part, current research on teleworking has been based on strong empirical foundations. In addition, by applying new methodologies (online social media analyses to observe discussions and collective activities among employees, proposed new scales to test the effect of traditional variables in the teleworking environments; see Table 5.2), new digital technologies have been shown to have potential for union organizing. When employees are unionized, the more deleterious effects of teleworking appear to be mitigated. The empirical results to date indicate that union organizing, and negotiating, can play a fundamental role in shaping teleworking conditions.

[3] *Scale*. Trade unions affect teleworking at different scales – at the workplace, sectorally, nationally and even at the international level. Micro-interactions (Uber drivers on Facebook), meso-organizational dynamics (worker representation committees), and macro-institutional characteristics (relevance of industrial relations systems in applying international frameworks for protecting the rights of teleworkers) have been studied. Overall, the complexity of trade union impact on teleworking has been demonstrated.

5.4.2 Policy Implications

Organizational policies

At the organizational level, three broad areas for policy have been suggested.

[1] *Working time*. Whether imposed by management or voluntarily undertaken by workers themselves, excessive hours of work appear to be a persistent issue for teleworkers. Through booms and crises, however, such behaviours have negative consequences on organizational performance (Holtgrewe 2014). Collective representation has the potential to counteract this effect (Bryson et al 2013; Berg et al. 2014). It therefore appears essential for organizations that rely heavily on teleworking to favour collective representation – for the well-being of employees and for the productivity of the firm.

[2] *Labour processes*. The presence of a union, however, may encourage firms to adopt labour processes that resemble Tayloristic deskilling in the design of teleworking arrangements to avoid transferring too much power to teleworkers. This tendency has a negative consequence –it curtails the opportunity for organizations to exploit the full potential of new digital technologies. Organizations should avoid Tayloristic teleworking processes (Eisele and Schneider 2020).

[3] *Working conditions*. To the extent to which organizations rely heavily on teleworking at the national and international levels, the establishment of common ground of rules across the jurisdictions can limit inter- and intra-organizational tensions in setting appropriate working conditions for teleworking employees or contractors.

Trade Union policies

[1] Union organizing by means of technology is no longer merely a possibility. Rather, it has now become vital to ensure that the rights of teleworkers are protected (Maffie 2020).

[2] Unions could develop communication *frames* that overcome the tendency to isolation and individualism. Instead, they should promote a sense of common purpose and inter-dependency among the teleworkers (Wirsig and Compton 2017). Labour organizations can gain traction by coupling *frames* regarding the common good of teleworkers with *individualized messages* for the diverse needs and identities of different categories of teleworkers (Holtgrewe 2014). In thinking about teleworking, one size clearly does not fit all. Diversity should be embraced through differentiated actions targeted at the very differentiated labour force of teleworking.

[3] To influence teleworking conditions, unions must negotiate and coordinate across multiple scales: workplaces, sectors, diverse communities of interest, national, and international. An acceptable baseline of protection requires negotiating with the state, at national and supranational levels, and pressuring for legislation that favours teleworkers' employment conditions and protection as well as for their labour rights to collective representation (Larsen and Anderson 2007; Prosser 2015).

5.5 Research Gaps and future avenues

Three limitations of the present literature dealing with the union-to-employer relationship must be emphasised.

[1] *Topics*. Two traditional employment relations topics are absent from union-to-employer studies of teleworking arrangements – collective agreements and labour conflicts. Research has shown that workers feel more protected and less anxious when remote working arrangements are included in the collective agreements. Unfortunately, there are no studies on the number of collective agreements that include teleworking clauses, the extent to which and how previous dispositions

required modifications, or how these changed over time. While in some cases new digital technologies may spur union organizing, there is little evidence about the extent to which and under what conditions these collective actions translate to labour conflict and its form and impact.

[2] *Comparative research.* Comparative research would permit a more comprehensive examination of the effects of digital organizing and negotiating on teleworking conditions. Studies on digital organizing among teleworkers should differentiate among organizations in which employees did not organize at all, those that self-developed their organizing strategies, those that were union-driven, and those having both forms. Similarly, research on negotiations in the world of teleworkers should compare conditions in organizations where there are no negotiations with those where employee committees handle them, others where unions are present, and organizations in which both forms are in place.

[3] *Union strategies.* To address the world of teleworking, traditional union strategies for organizing, negotiating, and mobilizing must undergo major transformations. The current debate, however, does not provide clear and specific guidelines for developing or deploying such innovations. Guidelines are required for tackling how to develop, insert, and steer networks to facilitate digital organizing. This would entail how to promote common “frames” while gaining organizing traction with diverse messages. Union strategies should identify the relevant issues for teleworking, find efficient ways to promote them through employee workplace representation, traditional collective bargaining, and national and supranational bargaining with employers and for public policies with States. Given the possibility for trade unions to shape teleworking at different scales, strategies for the coordination of reciprocal empowerment across scales must be defined.

6 Conclusion

Our knowledge synthesis regarding the impact of teleworking on three core dimensions of employment relations (manager-to-employee; colleague-to-colleague; union-to-employer) affords the opportunity to draw emphasise some notable findings and conclusions.

[1] *Main findings.* Teleworking arrangements have changed and continue to challenge traditional employment relations. This new configuration makes the three dimensions of employment relations more complex and fragile. Teleworking can trigger detrimental consequences for organizations, employee wellbeing, and union ability to influence labour rights. Paradoxically, excess surveillance and control can transform the appreciation of the flexibility of teleworking into a form of performance anxiety. Networking dynamics among colleagues might compensate for the isolation of the scattered workplace experienced by teleworkers. Finally, while union organizing and negotiating become more challenging in the absence of a physically unified workplace, several technology-enabled resources can be leveraged strategically.

[2] *Main policy implications.* Organizations must constantly develop new policies to support remote workers, provide free-of-surveillance spaces for socializing among them, and give such workers “voice” to negotiate teleworking arrangements at the individual and especially the collective level. Union strategies can use new digital technologies for mapping, connecting, and leveraging colleague-to-colleague relationships. Networks become the springboards to negotiate at workplace level to enhance workers satisfaction of teleworking arrangements. This can be coupled with, and reinforced by, negotiations at the sectoral, national, and supra-national levels for all teleworkers. “Umbrella” protection for non-unionized employees could be obtained by granting rights in labour laws with specific employment protection provisions. States play the central role in promoting laws that limit organizational surveillance powers over employees, favour spaces for employee collective voice within teleworking organizations, and provide resources for active labour market policies to train managers, employees, and unions on how to avoid the more detrimental aspects of teleworking for employees, organizations, and the society.

[3] *Future areas of research.* Our knowledge synthesis allows us to point to a few important areas worthy of additional research.

For the *manager-to-employee* relationship, two important and related topics should be assessed: (a) managerial strategies for supporting teleworkers, mechanisms for avoiding invasive surveillance,

and techniques for reducing employee anxiety; (b) reassessing the managerial competences required for these supervisory positions in teleworking organizations.

For the *colleague-to-colleague* relation two topics are of relevance: (a) under what circumstances do new remote relationships emerge, especially across different groups of colleagues; (b) what specific managerial practices can stimulate the emergence of a collective identity.

For the *union-to-employer* relationship, unions should be concerned about mapping, connecting, and mobilizing different remote networks among teleworking colleagues. In addition, future research should explore the kinds of collective action that have the largest impact on and are most effective in improving labour conditions in teleworking organizations.

Finally, the direct role of the State is absent in the debates we have analysed in this knowledge synthesis, but it deserves investigation due to the ability to frame the problem of teleworking in employment protection legislation or labour laws, and then to enforce the implementation of the rights of teleworkers with implications for working conditions, organizational dynamics, and union actions.

7 Knowledge mobilization

We will undertake a series of steps, with different strategies targeting diverse audiences, as we implement a knowledge transfer strategy. Three activities are planned for the dissemination of this work among scholars, practitioners, policy decision-makers, unions, and IR students.

[1] *Academic milieu.* We will launch the report through a McGill-UQAM webinar with presentations from key-note speakers including academics, practitioners and policy decision-makers who will comment on the report and highlighting ways for them to draw on it to target best practices, develop policies, and create future research agendas. The roundtables themselves will aim to reach a wide audience. Consequently, the report and presentations will be recorded, posted on UQAM, McGill, and CIRA (Canadian Industrial Relations Association) and practitioner organizations' websites, and circulated via social media such as LinkedIn and Twitter.

Our knowledge synthesis report will be elaborated in a literature review articles to be presented at the CIRA (Canadian Industrial Relations Association) and SASE (Society for the Advancement of Socioeconomics) annual conferences in 2022. We aim to publish a scholarly article on this research in a top-tier academic journal. Based on our suggestions for future research directions on the theme and subtheme of this project, we anticipate developing a research project and applying for SSHRCC and FRQSC Grants during the Winter 2022.

[2] *Professionals and decision-makers.* We expect to produce videos in collaboration with union and HRM professional organizations during Winter 2022 to addresses teleworking challenges. We will include clips for union executives, union stewards, and union members that briefly summarize our findings, and specifically tackle the implications for each targeted union profile. The videos will be subsequently posted on union confederation, federation, and local websites, as well as circulated through union social media and newsletter channels. In the same vein, we will collaborate with HR experts and HR professional associations, targeting HR managers in firms of all sizes. We will address the implications of our knowledge synthesis for their respective professional practices. Distribution will be in collaboration with national and provincial orders of HR professionals. These videos will be provided to Minister of Labour and to the office of Senator Frances Lakin, who are working to develop proposals for laws involving topics of this knowledge synthesis.

[3] *Students and society-at-large*. During Winter 2022, we plan to develop a series of pedagogical videos and guides to stimulate a debate among students from different employment-related disciplines at both the undergraduate and graduate levels. These videos will be available within our universities. Through CIRA and ILERA (International Labour and Employment Relations Association) networks, we will provide them to interested teachers worldwide. These materials will be made available free of charge, and via the McGill and UQAM websites they will be available to all interested parties.

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