The Transformation of Work in the COVID-19 Era

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Abstract

In March 2020, a massive experiment of work-from-home (WFH) started abruptly almost worldwide. In this article, I explore some the most important changes of the work practices linked to the work detachment from standard places, due to the COVID-19 shutdown. Notwithstanding the unprecedented nature of the shutdown experience, the changes experimented in this period might last beyond the end of the measures adopted to control the spread of the virus, due to the estimated long-term growth of remote working and the acceleration of virtuality and connectivity at work. The discussion draws on recent research on remote working and on the emerging research and theoretical debate on how COVID-19 is affecting organisation and work design, and it aims at highlighting some new directions in the evolution of work practices. Moreover, going beyond the emphasis placed on the success of the world-wide experiment of WFH backed by digital technologies, a special attention, in this analysis, is devoted to envisioning some risks associated to the transformation of work in the COVID era.

1. A view on the largest ever 'work-from-home' experiment

In March 2020 the most massive experiment of work-from-home (WFH) started abruptly. Europe following China, tackled the pandemic spread of the corona virus with the only effective action known to contrast the exponential spread of the virus: the *lockdown*, namely "a period of time in which people are not allowed to leave their homes or travel freely, because of a dangerous disease" (Cambridge Dictionary). How much, when and where the shutdown has been applied and is still implemented to face subsequent pandemic waves, it is a decision taken by each government according to the assessment of the threats posed by the virus to people's life, and it resulted in different degrees of restriction of people's freedom. Yet, it was clear that the routinely commuting home-office-home, of millions of workers, had to change overnight, as it happened at the Microsoft main campus in Seattle, where the number of employees dropped in few weeks from around 40,000 (end of February) to 5,000 (mid of March) (Weise 2020).

Italy was among the first and most hit countries, the lockdown was decided at national level on March the fourth and the impact on employees and firms was immediate and massive. The number of working hours dropped by 33% in medium size enterprises (Confindustria, 2020), and it has been estimated that around 8,000,000 employees started working from home (WFH), while the average number of remote workers before the lockdown in Italy was approximately 500,000.

This dramatic move of the workplace from office to home, brought with it the change of a set of work practices related to task allocation among distributed workers, task autonomy granted to them, new coordination mechanisms, and the change of the time frames according to which work is designed. For instance, the growth of remote working due to COVID has accelerated some trends already on the way, like connectivity and virtualisation of teamwork affecting the supervision style required in distributed organisations (Kniffin *et al*., 2021; Wang *et al*., 2020).

In this article, I will explore some the most important changes of the work practices, due to the WFH related to the shutdown and the acceleration of the digitalisation at work. The analysis will draw on previous studies on remote working, on the recent research on the effects of Covid on organisation design and on the theoretical debate on the new management research agenda after the Covid-19 pandemic (George, Lakhani and Puranam, 2020; Kniffin 2021; Unsworth, 2020). We need to develop our understanding on this huge change not only because it has affected the quantity and quality of work in the last year, but also because some arrangements might last well beyond the social distancing measures adopted to control the spread of the virus. Indeed, as Gartner's (2020) survey showed, more than two hundred HR managers interviewed estimated a long-term growth of the remote working. Moreover, a recent survey in USA showed that about 25 percent of all full work days will be supplied from home after the pandemic ends, compared with just 5 percent before (Barrero, Bloom and Davis, 2020). According to this study there are five mechanisms which might explain why WFH will stick: diminished stigma, better-than-expected experiences working from home, investments in physical and human capital enabling working from home, reluctance to return to pre-pandemic activities, and innovation supporting working from home.

These figures point to two important challenges that firms were facing in managing this transition and will have to manage in a post-pandemic scenario: how tasks and coordination and control mechanisms are designed when work is physically distributed, and how digital technologies used to overcome social distancing could be adopted in interaction with the new work arrangements and to improve work efficiency, effectiveness and people wellbeing.

Third, a dimension still overlooked by research on work and COVID is the relation between time and organisation (Rinaldini, 2016; Holt and Johnsen, 2019), the remote working and the digitalisation process are changing the individual and social experience of time and working time: one example is the *porosity* of time in WFH, another one is the time length and temporal location of meetings when they migrate online. To further deepen the analysis of work in the COVID era in relation to time, I will identify some changes over the four major dimensions of the temporal profile of any situation or event, identified by Eviatar Zerubavel (1981): *sequential structure*, in what order events take place; *duration*, how long they last, *temporal location*, when events take place, *rate of recurrence*, which tells us how often they do happen.

Analyses on the massive experiment of WFH due to COVID can draw on and can enrich at least three streams of research, which more recently are digging in depth on the transformation of work design at micro-level of analysis.

First, the recent body of studies on the phenomenon of *remote working* (Felstead and Henseke, 2017; Choudhury, Forougi and Larson, 2019), a board category including working from home (WFH) and working from anywhere (WFA), can help to identify implications and moderating factors of different arrangements. Secondly, in this context of digitalisation and connectivity boost, studies on WFH in the COVID era can draw on recent research on virtual work (Unsworth, 2020) and more in general on studies looking at how digital technologies affect

people and work. As recently highlighted "information communication technology (ICT) becomes ever more embedded in today's increasingly digital organizations, the nature of our jobs, and employees' work experiences, are strongly affected by ICT use" (Wang, Liu and Parker, 2020: 1; see also Waickman, 2015). Third, research on the micro-foundations of organisation design and the effects of Covid-19, and recent attention to work design from an agent-based perspective could provide a more comprehensive toolbox for studying work design arrangements post-pandemic, as organisations will face increasingly unpredictability in the workflows and workers are empowered to co-design the organisation alongside managers (Raveendran, Silvestri and Gulati, 2020). These changes have been amplified during the COVID WFH experiment, since workers at home are experiencing more autonomy and workflows are more frequently adjusted by firms to build more resilient organisations and business models (Verma and Gustafsson, 2020).

The article is organised in the following paragraphs: in the next paragraph I discuss the challenges at the level of work design due to COVID-19, the following one will be devoted to understanding the underestimated change of the relation between time and work, and in the last section some final conclusions will be drawn on the open issues in the 'new normal' workplace and furthermore future lines of research will be discussed.

2. The changing nature of work in the era of COVID-19 and its risks

2.1. When work is detached from standard offices

Work from home is one form of *remote working* which can be defined as (Di Martino and Wirth, 1990: 530):

> […] a flexible work arrangement whereby workers work in locations, remote from their central offices or production facilities, the worker has no personal contact with co-workers there, but is able to communicate with them using technology.

At the beginning of 2020 a massive experiment of WFH has been experienced by millions of employees in different sectors all over the world. The results of a survey conducted in May 2020 on a nationally-representative sample of the US population during the COVID-19 pandemic, showed that half the workforce was working from home, with 35.2% of workers who switched to working from home and an additional 15.0% already working from home pre-COVID-19 (Brynjolfssonat *et al*., 2020). A recent e-survey conducted in Europe by Eurofound (2020) showed that teleworking became (Eurofound 2020: 3):

> […] the customary mode of working for many employees who had limited or no previous experience of working in this way. In July, nearly half of the employees in the sample worked at home at least some of the time during the COVID-19 pandemic. Of these, a third reported working exclusively from home.

Italy has been one of the first and most hit countries, and the move to WFH solutions has been massive and sudden as in other countries. Provided the limited number of cases of smart working in Italy, before the pandemic, WFH for many managers and workers was a totally

new experience, bearing brand new challenges at organisational and technological level. To sum up, as effectively argued by George, Lakhani, and Puranam (2020: 1), "[t]he forced move to 'working from home' (WFH) that the pandemic created is perhaps the most significant organization design shock of our lifetimes".

The massive migration from office was indeed a twofold change. First, it was a physical migration of work to the home space, which prompted the emergence of different physical and time arrangements. Second, it meant a migration online of the majority of tasks. Indeed, companies invested on connectivity and digitalisation to support their daily activities during the lockdown, and communication and coordination processes have been supported by videoconferencing apps such as Zoom, Teams or Google Meet. As the CEO Satya Nadella pointed out delivering Microsoft's quarterly earnings report to Wall Street in April 2020 "We've seen two years' worth of digital transformation in two months" (Spataro, 2020: 1).

The detachment of the majority of working hours from the standard places and practices, offered workers more autonomy and temporal flexibility (Choudhury, Foroughi and Larson, 2019). Autonomy and flexibility have been easily managed before COVID-19, as documented by research on remote working and it mainly helped companies to offer their employees a better work-life balance (Bailey and Kurland, 2002; Felstead and Henseke, 2017). However, what companies are experiencing in the COVID era is not just one day off from company's location, but a much longer period of time out of office, which amounted to a full week during the shutdown, but might be extended much beyond the usual working hours at home, when firms will be back to normal (Brynjolfssonat *et al*., 2020).

This longer physical detachment of workers, often clerical ones, raises, on the one hand, an issue of how much autonomy could be granted to employees who in many cases were not given that much before and, on the other, how to tackle the lack of micro-coordination and supervision previously supported by the physical proximity. Indeed, WFH affected task allocation and monitoring practices by managers who could not rely anymore on a supervision style allowed by the physical co-presence with employees, managing by sight and coordinating "by walking down the corridors". For instance, how can the presence of subordinates be monitored by a manager who cannot check who is at work and who is not by one sight over the office?

In this scenario, there are open questions on whether tasks could be coordinated by modularising them (George, Lakhani and Puranam, 2020) or supervision is still needed. Indeed, supervision face-to-face may be the needed to channel the right information, to quickly solve problems, get the work done, and solve conflicts that might rise due to lack of social interactions among people or to mitigate the sense of isolation through socialising activities (Lilian, 2013; Morley, Cormican and Folan, 2015).

Virtual leaders need skills to delve on the coherent technologies according to the complexity of the information to convey (Ford, Piccolo and Ford, 2016). A risk related to digital solution adopted to support coordination mechanism, is that video-conferencing meetings might be used more for monitoring purposes than for communication ones. Thus, high connectivity, meant to facilitate communication and coordination processes, could be overused, becoming a source of stress for employees, due to high frequency of meetings, mails or WhatsApp used to monitor their advancements. The feeling of being always at disposal of the organisation, has been highlighted by a recent research of ILO showing that, the percentage of employees reporting they feel stressed was higher among those working from home on a regular basis,

and those highly connected working from anywhere than among those working at regular offices (Eurofound and ILO, 2017).

These changes had an impact on leadership skills required by the new working practices and the necessary shift of management attention from task execution to goal setting and purpose building, as highlighted by a recent research, virtual team leaders need "strong social networking skills; a global, multicultural mindset, greater sensitivity towards followers' state of mind, and a 24x7 orientation" (Lilian, 2013: 1256). However, the need to build new managerial capabilities may find some obstacles and inertia as a recent Gallup survey on WFH and COVID in UK has highlighted. Supervisors possess a limited capability to modify their communication and leadership style and to build trust with remote employees, since only six in ten employees know what is expected of them at work, and only 26% of employees strongly agree their manager is good at helping them clarify priorities (Gallup, 2020).

2.2. The growing use of digital technologies in a working day and its risks

A recent research across EU countries, investigated the impact of the rapid fall of ICT prices on WFH, showing that it is associated with a significant increase in the share of employees who work from home (Jerbashian and Vilalta-Bufi, 2020). This trend has been exploited by companies during the lockdown; the investment in digital technologies and cloud computing has indeed been boosted by the pandemic. Numbers provided by CEO Satya Nadella at the Microsoft's quarterly earnings report to Wall Street, make a clear picture of how the digital technology gathered momentum: 75 million daily Teams active users in April 2020, two-thirds of them have shared, collaborated, or interacted with files on Teams, moreover, in the same month, there have been "more than 200 million Microsoft Teams meeting participants in a single day, generating more than 4.1 billion meeting minutes" (Spataro, 2020: 1).

By the means of new technological infrastructures, companies have been able to digitise several day-to-day processes, like previously paper-based transactions and most of all meetings. Moreover, the opportunity to leverage on cloud computing and related apps (Dropbox, Google Drive, Slack, etc.), allowed asynchronous working practices, thus complex interdependent work could "be executed in a distributed context, with coordination relying not on video calls ('seeing the face') but rather on mutual observability of work ('seeing the work')" (George, Lakhani and Puranam, 2020: 1755).

Still, notwithstanding these asynchronous practices, as highlighted in the previous session, organisations needed virtual face-to-face interactions to support coordination mechanisms and to keep open all the vital connections among colleagues, managers, clients, beyond the standard use of mails. The growing use of digital technologies and videoconferencing apps might be related to two main risks: ergonomics and stress for hyperconnectivity (Quan-Haase and Wellman, 2006).

The first risk goes well beyond a correct use of the desk and digital devices, that have been centre stage in the ergonomics of the office work, and it concentrates on the correct use at home of the laptop or iPad or smartphone. It points to the fact that workers have to set up an office area and they find several problems related to the scarcity of space and devices suitable for a proper office work. Furthermore, another problem is associated with the correct use of digital devises in settings quickly arranged by people with what they have at hand in house (dining tables and chairs, home lamps, non-chairs like a bed or couch), that might not fit the worker

ergonomically, such as cases of poor lighting or laptops too low relative to the workers' eye height (Davis *et al*., 2020).

Stress and bad ergonomics are also associated to a second risk related to the high number of hours people are experiencing in video-conferencing. This risk has been named 'Zoom fatigue' (Sklar, 2020), and, on the one hand, it stems from managing very frequent video connections without the normal coffee and lunch breaks or breaks related to the physical transfer from a meeting place to the following one. On the other hand, it depends on the way individuals process information over video: the constant gaze our brain activates during a face-to-face is much harder when face-to-face is mediated by low resolution pc cameras, ineffective connections, etc.; delays of 1.2 seconds make people perceive the responder as less friendly or focused, the fatigue stems also from managing large audiences or having a conversation with an extreme close-up face (Fosslien and Duffy, 2020; Kretchmer, 2020).

2.3. Working from home, relations and interdependencies

One key component of work that has been affected in the massive WFH 'experiment' is the relational dimension of work. Working far from face-to-face daily relations with the boss and colleagues increased the sense of isolation and solitude of people: "the solitary nature of the covid-workplace is unprecedented" (Unsworth, 2020). The network of social ties is a key resource in the workplace as it conveys information, advice, and trust (Krackhardt and Hanson, 1993). Informal face-to-face talk in the building corners, corridors or at the bar, helps to maintain the network of personal ties. Thus, when employees are spread between on-site offices and home, social network maintenance may be negatively affected. In this vein, it has been highlighted that "working remotely is very effective if you can also restructure the organisational processes for how communication happens, how socialisation happens, and how coordination happens" (Choudhury, Forougi and Larson, 2019). Moreover, social relations support sensemaking and sense-giving processes, which provide emotional and cognitive frames to understand the future (Giorgi, 2017). These processes are important when people face high uncertainty about their future, as in tackling the ripple effects of COVID-19 on every aspect of human life and of the business life (Verma and Gustafsson, 2020). Coherently it has been suggested that in the current covid-workplace "people are dealing with fear, uncertainty, frustration, loneliness, and other lockdown relevant emotions, and it is likely therefore that this need for shared sensemaking will come to the fore" (Unsworth, 2020: 2).

Problems emerged during the shutdown have been only partially overcome by coming back to offices, since due to space constraints and social distancing norms, still a large part of the employees is working from home. In this process managers face the problem of choosing which tasks and roles could be kept at home, and which ones should be transferred back to office according to the space capacity.

Beyond space constraints of the company's buildings, we might identify two categories of determinants of these decisions, on the one hand they are related to the need of socialisation, previously highlighted, and work-life balance issues of employees with family members with health problems or home schooling. On the other hand, there are organisational determinants such as organisation culture awarding physical presence on-site and job demands and task interdependence.

Interdependence is a key factor in organisation design when coordination is a cardinal issue, as when the workforce is spread between offices, home and anywhere, indeed, "structuring the organisation around interdependencies facilitates the coordination of agents who have different tasks, goals, and knowledge" (Ravendraan, Silvestri and Gulati, 2020). When tasks are highly interdependent, they have to be kept together. Thus, the choice of which tasks should be moved together back to office, is based, among other factors, on task interdependence.

However, a recent review, considering how the power of job crafting (Wrzesniewski and Dutton, 2001; Lazazzara, Tims and de Gennaro, 2020) and job responsibilities is shifting to the role holder, suggests that task interdependence is often not fully known ex-ante, thus goal and knowledge interdependence are less tightly coupled with task interdependence (Ravendraan, Silvestri and Gulati, 2020). When employees gain more freedom on goals and on their knowledge (Ravendraan, Silvestri and Gulati, 2020: 4):

> […] as a result, goal and knowledge interdependence become salient in their own right as indispensable components of organization and job design. This shift in the nature of work implies that agents have become involved in the design process as co-designers rather than recipients.

From this perspective, in the transition phase of post shutdown, workers and their knowledge are a key resource to design future work.

2.4. The temporal dimensions of changing work practices

The metamorphosis of work due to the join effect of WFH and digitalisation has put central stage the role of space as a key resource and a changing dimension of future work, I suggest we should devote same attention to time, as the other central organisational dimension impacting on different facets of work (Rinaldini, 2016; Holt and Johnsen, 2019).

I would provide a preliminary view of temporal dimensions of work practices in the era of COVID-19 drawing on the four dimensions of the temporal profile of any situation or event identified by Eviatar Zerubavel (1981): *sequential structure*, in what order events take place; *duration*, how long they last, *temporal location*, when events take place, *rate of recurrence*, which tells us how often they do.

The *sequential structure* of the events in offices and plants has been determined according to the task interdependence, for decades, as in the case of the assembly line, where workers have been aligned according to a univocal chain of tasks. The standard sequential structure of tasks may be altered when work is distributed, since it might change due to the higher degree of freedom that could be given to employees working from home. They might be allowed to take some decisions on the sequence of task and activities, provided that the goal is achieved by a defined deadline. Furthermore, more connectivity, the use of cloud to share documents, can be leveraged to disentangle interdependent tasks, moving from sequential to concurrent activities, and reducing lead times.

The *duration* of tasks and events is accelerated in the COVID and virtual era. First, we are speeding up the coordination processes, when digitally mediated: social event like meetings, webinars, lectures, provided online to an external audience have been shortened to reduce the

workload of video-conferencing, changing their format. Furthermore, the uncertainty companies are facing makes them to plan on a shorter time horizon, and this might have an impact on the organisation design as well. Indeed, the diffusion of the agile approach to organisation and innovation implies shorten cycle time and frequent iterations. This approach affects also the *rate of recurrence of tasks and events*, meaning how often they are repeated. Shorten cycle times are related to multiple iterations, thus to a higher rate of recurrence of some activities.

Finally, as the *temporal location* (when events take place) is concerned, temporal location of tasks was mainly determined by the office timetable in the traditional workplace. The massive transition to home has emphasised the need of a temporal location of activities driven by employees, and the issue of flexible timetables to mitigate conflicts at home between care giving duties (home schooling) and job duties, has been addressed. On the other hand, however, WFH and more in general remote working, embodying all the other forms of working from anywhere, are changing the temporal location of events and activities, creating the opposite problem of time *porosity* between individual and working time (Genin, 2016). A recent empirical study based on a survey on 502 executives about their use of internet at work shows that (Vayre and Vonthron, 2019):

> […] the clear boundaries that in the past have delimitated work and personal life are dramatically changing and are dismantled, that high-intensive, extensive, and porous Internet uses for work appear to foster the permeability between work and personal life, diminish managers' dedication and vigor at work, and favor Internet addiction.

Recent research has spotlighted work-to-family boundary permeability, to curtail work spilling over into family life (Choroszewicz and Kay, 2020). As suggested by the research of Shumate and Fulk (2004), recently included among studies that can inform research on COVID and WFH, "communication is needed to create boundaries between work and home, and how it can help […] overcome conflicting expectations" (Unsworth, 2020: 2). Thus, temporal location of tasks determined by the organisational choices and by physical boundaries, in the digital and COVID era, are on object of negotiation and conflicting preferences.

3. Conclusions and future line of research

To contrast the exponential spread of Coronavirus, in a few weeks in March, a massive number of employees has been detached from their traditional offices to be transferred at home. This change has been coupled with a large investment on digital technologies to improve connectivity and facilitate the transition to a new way of coordinating from home. The article analyses some of these changes.

A first consideration regards the impact of the transformation of work, triggered by the COVID-19. Notwithstanding the singularity of the shutdown experience, surveys suggest that most of the changes that have been implemented will last on the long term, since they are coupled with the growing trend toward remote working and digitalisation at work. Thus, going back to the 'next normal', companies could retain new practices and technologies quickly adopted during the shutdown, also because the perception of working from home have improved and companies and workers are more willing to exploit the investments made

in human capital and technological infrastructures during the lockdown (Barrero, Bloom and Davis, 2020).

A second consideration concerns the many changes we are witnessing at level of organisation and work design, that are related to the interplay between new work practices, investments in digital technologies and workers' approaches. Yet, in order to deepen our understanding of the organisational and managerial implications of the pandemic in the medium long term, we need further investigation into the particular combinations of tasks, people and technology infrastructure that enable organisations to work in distributed forms (George, Lakhani and Puranam, 2020).

The sudden diffusion of WFH allowed the decentralisation of a higher degree of autonomy to employees at home and more time flexibility. This change seems consistent with the raise of employees' productivity while they work from home (Wang *et al*., 2020), thus an open question regards the interplay between organisational solutions towards more empowerment and freedom that can be exploited by WFH with the support of digital technologies and their impact on productivity and employees' well-being.

A recent research suggests that autonomy at home negatively relates to loneliness (Wang *et al*., 2020), however the inertia of managers in switching to a more participative leadership style may increase the use of digitalisation at work to increase supervision instead of coordination, thus we should shed light on the relationship between digital technologies in WFH practices, coordination and workload, stress and excessive supervision.

Moreover, going back to the new normal at office, the risk is that employees who have experienced greater autonomy, while working from home, and an intense learning process about new practices and technologies, cannot leverage on their new knowledge to participate in the co-design process of their own jobs, or to be part of the decision about the way work should go back to the office.

One of most important problems, highlighted by the analysis, is the dissolution of the social fabric of the workplace due to the massive WFH. Informal social relations which convey a rich set of resources, emotions, sense-making cannot be substituted by Zoom café or informal meetings by Google Meet. Thus, a line of inquiry concerns the new role played on the one hand by the office, which is the traditional centre for creating culture and a sense of belonging (Sneader and Singhal, 2021) and on the other by the new leadership.

A consideration that can be drawn from the analysis of the phenomenon of work affected by the COVID revolution, is that, notwithstanding the positive effects of WFH and digitalisation on some dimensions of work such as productivity, work-life balance, employees' empowerment, we should not underestimate the different risks linked to these changes. The analysis has identified some risks concerning people well-being and related lines of research: the risk of the ergonomics of WFH, connected to a wrong use of spaces and devices at home, the risk related to the stress for hyper-connection and work-life permeability. Furthermore, two types of fatigue have been detected in this period, a fatigue derived from the intensification of work due to the absence of pauses or transportation times to move from home to office and back and a 'Zoom' fatigue caused by the brain load due to intensive video conferencing.

Finally, the emerging malleability of the time dimensions: structure, duration, rate of recurrence and temporal location in the evolution of work design, points to the question of how these dimensions will be affected by the COVID-19 impact on organisation design and

how much different perceptions of time will be an object of negotiation and conflicting preferences.

Keywords

COVID; organisation design; work practices; digitalisation; time

References

Brynjolfsson, E., Horton, J. J., Ozimek, A., Rock, D., Sharma, G., and TuYe, H.Y. (2020), "Covid-19 and remote work: An early look at us data", NBER Working Paper No.27344.

Choroszewicz M., and Kay F. (2020), "The use of mobile technologies for work-to-family boundary permeability: The case of Finnish and Canadian male lawyers", *Human Relations*, Vol. 73 (10): 1388–1414

Choudhury P., Foroughi C., and Larson, B. (2019), "Work from anywhere or co-locate? Autonomy versus learning effects at the United States Patent Office", Working Paper 19-054 , Boston, MA: Harvard Business School.

Confindustria (2020), *Seconda edizione dell'indagine sugli effetti della pandemia da covid-19 per le imprese italiane, Roma*, Centro Studi Confindustria e dell'Area Affari Internazionali di Confindustria.

Davis K.G., Kotowski S.E., Daniel D., Gerding T., Naylor J., and Syck M. (2020), "The Home Office: Ergonomic Lessons From the 'New Normal'", *Ergonomics in design*, October: 4–10

Di Martino, V., and Wirth, L. (1990), "Telework: A new way of working and living", *International Labour Review*, 129 (5): 529–554.

Eurofound (2020), "Living, working and COVID-19, COVID-19 series, Publications Office of the European Union, Luxembourg.

Eurofound and the International Labour Office (2017), "Working anytime, anywhere: The effects on the world of work", *Publications Office of the European Union*, Luxembourg, and the *International Labour Office*, Geneva.

Felstead, A. and Henseke, G. (2017), "Assessing the growth of remote working and its consequences for effort, well-being and work-life balance", *New Technology, Work and Employment*, 32: 195-212. DOI: 10.1111/ntwe.12097.

Ford, R.C., Piccolo, R.F., and Ford, L.R. (2017), "Strategies for building effective virtual teams: Trust is key", *Business Horizons*, 60 (1): 25-34.

Fosslien L., and Duffy, M.W. (2020), "How to Combat Zoom Fatigue", Harvard Business Review, April.

Gallup (2020), "Gallup real future of work survey", Online panel 10-13 April 2020.

Gartner (2020), "Gartner HR Survey Reveals 41% of Employees Likely to Work Remotely at Least Some of the Time Post Coronavirus Pandemic", News Release, April 14.

Genin E., (2016), "Proposal for a Theoretical Framework for the Analysis of Time Porosity", *International Journal of Comparative Labour Law and Industrial Relations*, Vol. 32 (3): 280-300.

George G., Lakhani, K.R, and Puranam, P. (2020), "What has changed? The Impact of Covid Pandemic on the Technology and Innovation Management Research Agenda", *Journal of Management Studies*, 57 (8): 1754-1758.

Gerdeman D., (2020), "How the Coronavirus Is Already Rewriting the Future of Business", *Harvard Working Knowledge*, March 16.

Giorgi S. (2017), "The Mind and Heart of Resonance: The Role of Cognition and Emotions in Frame Effectiveness", *Journal of Management Studies*, 54 (5): 711–738.

Holt R., and Johnsen, R. (2019), "Time and Organization Studies", *Organization Studies*, 40 (10): 1557-1572.

Jerbashian, V., and Vilalta-Bufi, M., (2020), "The Impact of ICT on Working from Home: Evidence from EU Countries", *GLO Discussion Paper*, No. 719, Global Labor Organization (GLO), Essen.

Kniffin, K.M., Narayanan, J., Anseel, F., Antonakis, J., Ashford, S.P., Bakker, A.B., Bamberger, P., Bapuji, H., Bhave, D.P., Choi, V.K., Creary, S.J., Demerouti, E., Flynn, F.J., Gelfand, M.J., Greer, L.L., Johns, G., Kesebir, S., Klein, P.G., Lee, S.Y., Ozcelik, H., Petriglieri, J.L., Rothbard, N.P., Rudolph, C.W., Shaw, J.D., Sirola, N., Wanberg, C.R., Whillans, A., Wilmot, M.P., and Vugt, M.V. (2021), "COVID-19 and the Workplace: Implications, Issues, and Insights for Future Research and Action", *American Psychologist*, 76 (1): 63–77. https://doi.org/10.1037/amp0000716.

Krackhardt, D., and Hanson J.R. (1993), "The informal network: the company", *Harvard Business Review*, July-August: 104–111.

Kretchmer, H. (2020), "Why 'video call fatigue' might be making you tired during lockdown - and how to beat it", *World Economic Forum*, May 6.

Lazazzara A., Tims M., de Gennaro D. (2020), "The Process of Reinventing a Job: A Meta–synthesis of Qualitative Job Crafting Research", *Journal of Vocational Behavior*, 116 (B), 1–18.

Lilian, S.C. (2014), "Virtual teams: Opportunities and Challenges for E-leaders", *Procedia-Social and Behavioral Sciences*, 110: 1251-1261.

Morley, S., Cormican, K., and Folan, P. (2015), "An analysis of Virtual Team Characteristics: A Model for Virtual Project Managers", *Journal of technology management & innovation*, 10 (1): 188–203.

Quan-Haase, A., and Wellman, B. (2006), "Hyperconnected Net Work: Computer-Mediated Community in a High-Tech Organization." in C. Heckscher and P. Adler (eds), *The Firm as a Collaborative Community: Reconstructing Trust in the Knowledge Economy*, 281–333, New York: Oxford University Press.

Raveendran M., Silvestri L., Gulati R. (2020), "The Role of Interdependence in the Microfoundations of Organization Design: Task, Goal, and Knowledge Interdependence", *Academy of Management Annals*, 14 (2): 828–868.

Rinaldini M. (2016), "Tempo e organizzazione" in M. Neri and M. Rinaldini (a cura di), *Tempo e giustizia nell'analisi organizzativa*, Roma: Carrocci Editore.

Sklar J. (2020), "'Zoom fatigue' is taxing the brain. Here's why that happens", *National Geographics*, April 24.

Sneader K., and Singhal S. (2021), "The next normal arrives: Trends that will define 2021—and beyond", *McKinsey.com*, January.

Spataro J. (2020), "2 years of digital transformation in 2 months", *Microsoft.com*, April 30.

Unsworth K., (2020), "Human Relations virtual special issue: Virtual Working", H*uman Relations*, vol. 73 (7): 1036–1040.

Vayre E., Vonthron A.M. (2019), "Identifying Work-Related Internet's Uses at Work and Outside Usual Workplaces and Hours and Their Relationships with Work–Home Interface, Work Engagement, and Problematic Internet Behavior", *Frontiers in Psychology* 10: 1–15.

Vermaa S., Gustafsson A. (2020), "Investigating the emerging COVID-19 research trends in the field of business and management: A bibliometric analysis approach", *Journal of Business Research,* 118: 253–261.

Wajcman, J. (2015), *Pressed for Time: The Acceleration of Life in Digital Capitalism*. Chicago: The University of Chicago Press

Wang B., Liu Y., and Parker S.K. (2020), "How does the Use of Information Communication Technology Affect Individuals? A Work Design Perspective", *Academy of Management Annals*, 14 (2): 695-725.

Weise K. (2020), "Ahead of the Pack, How Microsoft Told Workers to Stay Home", *New York Times*, March 15.

Wrzesniewski, A., and Dutton, J.E. (2001), "Crafting a Job: Revisioning Employees as Active Crafters of their Work", *The Academy of Management Review*, 26 (2): 179–201.

Zerubavel E. (1981), *Hidden Rhythms. Schedules and Calendars in Social Life*, Chicago: University of Chicago Press.