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How Remote Work Changes the World of Work

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Abstract

Remote work is typically characterized as work that is done at some physical distance from the office. Existing research has shown that the main elements of this characterization—physical distance and the office—are far more complex than most people realize. This review develops a framework that refracts the concept of remote work into four types of distance—psychological, temporal, technological, and structural—and three objects from which one can be distant—material resources, social resources, and symbolic resources. We then use this refraction framework to answer five questions about the way remote work is changing the future of work: (*a*) Who will work remotely? (*b*) Where will people work remotely? (*c*) When will people work remotely? (*d*) Why will people work remotely? and (*e*) How will people work remotely? After demonstrating how existing research can help us answer these questions, we discuss important avenues for future investigation.

INTRODUCTION

Remote work is not new. Offshoring, telecommuting, teleworking, virtual teaming, and distributed teaming are some of the many structures that organizations have devised to enable people to work together from locations other than the office when coordinating tasks.

Although remote work has existed for many years in its varied forms, and the technological infrastructure available to support it has matured rapidly in the last half century, remote work did not occupy a central place in our societal discourse until the dawn of the COVID-19 pandemic when governments around the world began to place restrictions on people's physical mobility. A survey conducted by the US Census Bureau found that in early 2019 fewer than 6% of respondents worked remotely in a permanent capacity, in some form. By May of 2020 over one-third of all employed US citizens worked from home full-time, which roughly mirrors prepandemic estimates for the share of work that could be done remotely.

Since the days of government lockdowns, the share of people working remotely from home full-time has declined. As societies have opened back up, so too have most workplaces. But change is in the air. Many organizations are adopting some type of remote work policy that allows employees to work at locations other than the office permanently (remote work) or for some period of time each week (hybrid work). Not surprisingly, today's popular discourse about remote work assumes that the object from which people are remote is the organization's physical building—the office, the workplace, or as many people simply call it, alluding to a physical location as they say it, "work." That same discourse also assumes that remote work is a new phenomenon. We question both of these assumptions in this review.

We begin by suggesting that distance is a multifaceted construct. When people talk about physical distance, they are most often using it as a broad term that covers four independent constructs: psychological distance, temporal distance, technological distance, and structural distance. We suggest, similarly, that the office might be better understood as a synecdoche, in many ways a metaphor that describes three key resources necessary for doing work: material resources, social resources, and symbolic resources.

Using these two dimensions—physical distance and the office—we then review more than two decades of empirical research on people working remotely to answer five key questions about the future of remote work:

1. Who will work remotely?
2. Where will people work remotely?
3. When will people work remotely?
4. Why will people work remotely?
5. How will people work remotely?

Our goal in posing these questions is to help researchers, businesses, organizations, and policy makers understand how remote work is likely to affect the future of work. The answers to these questions reflect the cumulative knowledge generated through studies of different kinds of work arrangements that have been used to facilitate remote work in knowledge-intensive organizations over the last quarter century. We conclude by discussing opportunities for future research.

REMOTE WORK: A REFRACTION FRAMEWORK

The Merriam-Webster Dictionary defines remote as "being, relating to, or involving a means of doing or using something from a distance" (**https://www.merriam-webster.com/dictionary/remote**). Thus, to be remote from something is to be distant from it. The assumption in such a definition, of course, is that the thing from which one is distant is central, that the primary action

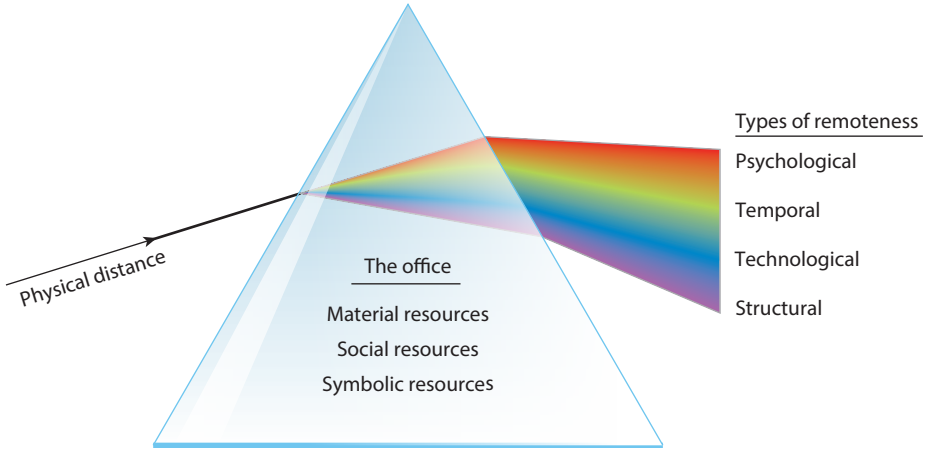

Figure 1

Refracting remote work. Remote work is like light refracting through a prism. The office, which is constituted by material, social, and symbolic resources, is the prism that refracts physical distance into its psychological, temporal, technological, and structural dimensions.

happens in close physical proximity, and that all other forms of action are somewhat abstracted from it—hence distant. The definition directs our attention in two ways, first to the concept of distance and second to the thing from which we are distanced. In most popular conceptualizations, distance is rendered physically as one's geographic position relative to the object of interest. And that object of interest is typically the office building in which a worker is assigned a workspace. However, the existing literature on remote work suggests that these simple characterizations of distance and its object are overly narrow.

It is perhaps useful to think of remote work as light refracting through a prism (see **Figure 1**). Physical distance is the light source projected into a prism. This light source contains a full spectrum of colors imperceptible to the naked eye. However, when the light passes through the prism, it undergoes refraction, causing it to split into different wavelengths, becoming a visible, colorful spectrum. A prism can refract light differently depending on its qualities, such as its shape, color, and density. Thus, we can liken the office to a prism. The various elements and resources of work contained in the office are its qualities that affect what we see in the refraction of physical distance. During refraction, we become attuned to how physical distance is also composed of psychological, temporal, technological, and structural distance. Thus, examining how the prism of the office refracts physical distance allows us to understand the different forms of remoteness and how they are interconnected.

For example, consider an employee working remotely from their team. We can apply the refraction metaphor to see how the light source (physical distance) is projected through the prism (social resource), which refracts the light into its key components (psychological and structural distance). Depending on the degree and nature of task interdependence (a characteristic of a resource), an individual who is remote from their team (resource) may feel both psychologically and structurally distant (an element of remoteness inherent in physical distance).

By conceptualizing remote work as refraction, we gain a more comprehensive perspective on remote work's mechanisms and effects. In this section, we elaborate on the different components of remote work's refraction. First, we provide an overview of the four forms of remoteness embedded within the concept of physical distance: psychological, temporal, technological, and structural distance. We then elaborate on the material, social, and symbolic resources that have historically

been defined as resources provided at and by the office. Based on existing research, we provide definitions for each resource and describe their relation to the various forms of distance. Importantly, studies have examined multiple types of distance with multiple resources. Our intent is not to suggest that these combinations are mutually exclusive but to provide a helpful starting point for understanding the impacts of remoteness on various taken-for-granted aspects of work. Through our definitions and examples, we aim to explicate the various ways in which scholars have examined remote work beyond the simple definition of physical distance from an office.

Characterizing Remoteness: In What Ways Can a Person Be Distant?

The first dimension that characterizes remote work is the forms of distance people experience. These include (*a*) psychological, (*b*) temporal, (*c*) technological, and (*d*) structural distance (see **Table 1**). Although many of these forms of distance are often interrelated (e.g., temporal distance is often associated with psychological distance), treating each as analytically separate allows for more nuanced examinations of remote work and its related outcomes.

Psychological distance. Although physical distance is inherent in most remote work configurations, psychological remoteness is dominant, although implicit, in much of the remote work research. For example, many studies use physical separation from the office to characterize remote work, but they investigate the effects of psychological distance (e.g., lack of communication) on social or cognitive processes (e.g., developing shared mental models) (Burke et al. 1999). Psychological distance, defined as the cognitive, affective, or social separation between oneself and another person, requires a high degree of cognitive effort and abstract mental construal to traverse (Trope & Liberman 2010). Examples of psychological distance include disparate ways of processing information due to different demographic, sociocultural, or national backgrounds (Gibson & Gibbs 2006, Nurmi & Hinds 2016). Therefore, the experience of psychological distance can vary from person to person. It also appears as a lack of social connectedness (Raghuram & Wiesenfeld 2004) and instances of conflict in distributed teams (Hinds & Bailey 2003). Although psychological distance is distinct from physical distance, being close in proximity can often help bridge psychological gaps by increasing familiarity, facilitating knowledge sharing, and promoting trust (Golden & Raghuram 2010, Hinds & Cramton 2014).

Temporal distance. Another form of remoteness is temporal distance, defined as separation across time due to differences in work schedules, time zones, or asynchronous communication. Compared to in-person interaction, remote work requires technology-mediated communication, often accompanied by temporal delays, interruptions, or wait times for responses (Yang et al. 2022). This temporal disconnection is most evident in geographically distributed teams with members in different time zones, often accompanied by difficulties with communication and coordination (Cramton & Webber 2005). However, workers can also experience temporal distance when physically proximal. For example, the asynchronous nature of information-communication technologies (ICTs) such as email can create temporal distance regardless of where team members are physically located in space (Erhardt et al. 2016). Similarly, remote workers can be temporally proximal by making themselves available through ICTs in ways that facilitate instantaneous communication exchange (Cristea & Leonardi 2019). Temporal distance can also manifest through varied work schedules as individuals work at different times during the day and/or throughout the week.

Technological distance. Technological distance refers to the discrepancy in technology-related features and practices—such as tool use, media richness, or technological proficiency—that create a disconnection between coworkers. The diverse features of digital tools, such as Zoom, Slack, and ChatGPT, enable individuals to deploy these tools in a variety of ways. Thus, the factors that

Table 1 Definitions of types of remoteness and resources of the office

Characterizing remoteness: In what ways can a person be remote?		
Dimension	**Definition**	**Examples of remoteness**
Psychological	Distance is based on the cognitive, affective, or social separation between oneself and another.	One worker comes from a culture that values straightforwardness, while their colleague comes from a culture that values politeness. A team lacks trust and psychological safety due to poor communication. Globally distributed teams struggle to develop shared mental models because of varying social contexts and experiences.
Temporal	Distance is based on separation in time.	An employee works in Greenwich Mean Time while their colleague works in Pacific Standard Time, an 8-h time difference. Two coworkers are unable to coordinate effectively because of conflicting work schedules. Teammates collaborating using ICTs must wait for others to respond.
Technological	Distance is based on discrepancies in technology-related features and practices of using technology.	Workers communicate with their managers only through email and chat; their messages lack context and social cues, leading to misunderstandings. Remote employees feel isolated due to the limited capabilities of their tools. Teammates who struggle with poorly designed tools fail to work together effectively.
Structural	Distance is based on formal or informal organizational or administrative misalignments.	An employee at home switches from work and home tasks during the day, while their team in the office focuses only on work tasks. Remote workers receive little context and guidance from management. Individuals' social network positions change when interactions are altered or limited.
Work resources: What are the elements of work from which a person can be remote?		
Element	**Definition**	**Examples of objects**
Social resources	The informal relations, information, and emergent qualities inherent to social networks; analysis can be at the level of one's team or other people	A network of people who can help solve a problem Trust and knowledge sharing Social capital, status, or advice networks
Material resources	The functional and task-related equipment, infrastructure, and technologies necessary for a person to complete their work	Desks, computers, chairs, and other equipment needed and used to perform work The physical bodies of other people Software and ICTs such as videoconferencing, enterprise chat, email, etc.
Symbolic resources	The objects and elements within an organization that have meaning and significance based on the collective interpretation of individuals	The physical layout of the office, which conveys meaning about an organization's culture Formal dress codes representing professionalism and conformity Act of commuting representing a distinction between personal and work life

Abbreviation: ICT, information-communication technology.

make up technological distance can be intrinsic to the tool design or attributed to how individuals use technology in daily life. One way technological distance is experienced is through the lack of media richness of communication tools. For example, depending on the technology, virtual interactions lack specific forms of social information such as body language, tone of voice, or context (Burke et al. 1999, Daft & Lengel 1986, van Zoonen & Sivunen 2022). Individuals also tend to use the same technologies differently, which creates distance through misaligned tool-use

practices (Karl et al. 2022). Moreover, technology also enables separation from the workplace and can combine with other forms of distance (e.g., psychological, temporal, structural distance) to amplify experiences of remoteness.

Structural distance. The final type of distance identified in the literature on remote work is structural distance, which describes separation-based misalignments between formal and informal organizational demands, functions and departments, and workers and their bosses. When workers are colocated in an office, the structural features of work and the organization in which they are embedded are more conspicuous and perceptible; the worker is more stably situated within a framework of organizational norms and systems. For example, traditional work arrangements call for specified hours of availability when individuals are visible to others, and expectations are that individuals work during office hours (e.g., in a typical 9 to 5 work arrangement). However, in remote work arrangements, evaluation of work is not as straightforward when employees' work is mainly hidden from supervisors (Garrett & Danziger 2007). Additionally, coordination becomes more complex in remote work situations, and work-nonwork life boundaries become blurred (Richter 2020, Song & Gao 2020). Due to the relational nature of informal work hierarchies, structural distance is often accompanied by psychological distance and can exacerbate or be amplified by existing states of remoteness.

Resources in the Office: From What Can a Person Be Remote?

If people can be distant from things in multiple ways, it seems important to understand from what it is they are actually distant. On the surface, the answer may seem obvious—the office—which can be defined as a physical location with an official address associated with an organization (Barsness et al. 2005, Golden & Eddleston 2020, Windeler et al. 2017). However, the office is more than an address and building. Within the literature, scholars use the term the office broadly to refer to a centralized entity that contains the resources typically associated with work.

The office centralizes and contains three main elements of work. First, researchers have highlighted the office as a centralized location containing material and embodied objects necessary to complete one's work (e.g., Brown & O'Hara 2003). Second, other studies emphasize the office as a demarcated space for interaction and social relations (e.g., Ajzen & Taskin 2021, Bailey & Kurland 2002, Golden 2007). Last, a third set of studies focus on the office symbolically. This research emphasizes the meanings and interpretations that individuals imbue to work that distinguish work from other aspects of an individual's life (e.g., Endrissat & Leclercq-Vandelannoitte 2021, Lapierre et al. 2016).

In the following sections, we dive into these three resources for work—material, social, and symbolic—traditionally contained in the office. We outline findings from extant research describing what happens when workers are psychologically, temporally, technologically, and structurally remote from each of these resources. **Supplemental Table 1** includes additional findings at the intersection of types of remoteness and the different work resources associated with the office.

Supplemental Material >

Material resources. To complete their work, individuals require and interact with material resources, defined as objects, artifacts, and embodiments that endure over space and time (Leonardi 2013). In studies of remote work, many researchers describe material resources as tangible and physical artifacts such as equipment and desks (Nash et al. 2018, Song & Gao 2020, Workman et al. 2003). However, material resources can be conceptualized from a broader perspective that also includes the configuration of space and people within a given environment (Ajzen & Taskin 2021, Woo et al. 2022). For example, in his research on coworking, Spinuzzi (2012) examined the arrangement of worksites focusing on tangible and enduring aspects of the setting, including

different rooms, decor, furniture, and the physical bodies of people. Additionally, material resources do not necessitate a physical form. Studies of remote work have also examined how software and ICTs are material because they have enduring and embodied forms (Kuruzovich et al. 2021, Leonardi et al. 2010, McLarnon et al. 2019). Thus, we define material resources as objects, artifacts, and embodiments persisting across time and space that individuals interact with to complete their work.

Studies exploring the impact of remote work focusing on material resources previously contained in the office have found that workers can experience both closeness and distance. For instance, research examining psychological remoteness found that tensions can arise between workers when they are in different physical locations (e.g., Harris 2003, Leonardi et al. 2010). Similarly, when employing a perspective of structural remoteness, studies also found that being distant from material components of the office can result in disparate practices for how workers complete their work (e.g., Garrett & Danziger 2007). As an example, Bloom and colleagues' (2015) experiment comparing employees working from home from those in the office found that being separated from distractions emanating from material objects found at the office, such as coworkers' ringing phones, coincided with home-based workers taking fewer breaks. Additionally, from the perspective of technological remoteness, increased access to and reliance on material resources such as ICTs for remote work can also amplify distance (Baruch 2000, Bosch-Sijtsema & Sivunen 2013, Karl et al. 2022). For example, Carillo and colleagues (2021) found that workers lacking the technical ability and correct setup of technology and equipment faced difficulties adjusting to remote work compared to workers who did.

However, remote work, while primarily associated with distance from material aspects of the office, can also result in closeness. Employing a lens of temporal remoteness demonstrates that physical distance from the office can also bring workers temporally closer to certain material resources (Hill et al. 2015). Because material objects such as computers and software are often brought out of the office and into locations such as a person's home, studies show that workers can access them during nonworking hours (Raghuram & Wiesenfeld 2004). Workers can experience intensified connectivity with their work devices especially under the expectations of managers scrutinizing their remote work (Barsness et al. 2005), blurring the lines between accountability and surveillance.

Ultimately, these studies illustrate how physical separation from the material resources traditionally at the office can lead to different forms of distance depending on what characterization of remoteness one chooses to focus their attention. Workers can experience both amplified distance and closeness to material resources depending on the type of remoteness being examined.

Social resources. Within the container of the office, a worker also has access to social resources, which we refer to as social-psychological assets that, when drawn upon, enable individuals or organizations to function more effectively. Social resources differ from material resources in that they are separate from physical forms, although they are often contained within them. For example, the physical presence of a coworker is a material resource in that one can access the person, interact with them, and converse face-to-face. However, the social resource embodied by that coworker is the social capital or sense of connection that is possible only through social interaction. In social relationships, individuals provide and exchange information, support, and knowledge critical for work effectiveness and performance (Chong et al. 2020, Hinds & Cramton 2014). However, accessing knowledge, support, and information requires building trust, reliability, intimacy, and bonded commitment (Bartel et al. 2012, Gibson et al. 2011, Golden & Raghuram 2010, Halford 2005). Thus, workers develop and obtain social resources by interacting with others through interpersonal exchanges (Cristea & Leonardi 2019, Flavián et al. 2022).

Studies on social resources can be broken into two levels of analysis. First, many researchers consider social resources at the level of a team. Second, remoteness from social resources has been more broadly conceptualized as the distance from other people in general.

Team. A team is the core group of colleagues with whom a person frequently interacts and shares interdependent work. Studies that foreground teams as the object of remoteness emphasize how teams share a common purpose, often related to specific projects or ongoing work tasks (Cramton & Webber 2005, Gibson et al. 2011). Teams are interdependent and require coordination, collaboration, and communication to achieve their goals (Fiol & O'Connor 2005, Gibbs 2009, Waizenegger et al. 2020). Thus, studies often investigate the shared processes, procedures, and mental models that develop between group members (Maynard & Gilson 2014, McLarnon et al. 2019). Notably, a team can be composed of individuals with different qualifications, information, skills, and backgrounds (Boell et al. 2016, Gibson & Gibbs 2006).

Remote workers, whether the sole remote member or part of an entirely virtual and distributed team, can experience several types of remoteness due to physical distance. Because teams are characterized by interdependence and require high levels of coordination, greater trust and psychological closeness are necessary for effective teamwork. For example, in geographically distributed teams, higher degrees of psychological safety mitigate the adverse effects of national diversity in virtual teams by facilitating more effective communication (Gibson & Gibbs 2006). Physical distance can also manifest as psychological distance in that remote team members encounter difficulties in developing shared mental models (Burke et al. 1999) and team identification (Millward et al. 2007).

Similarly, remote workers experience temporal distance from teammates that negatively impacts workflow due to the highly interdependent nature of teamwork (Rico & Cohen 2005). However, not all temporally distant work arrangements result in undesirable performance outcomes. For example, Erhardt and colleagues (2016) found that affordances of email (asynchronicity, editability, persistence, and replicability) and perceptions of time (time for face-to-face interaction and time management) facilitated constructive conflict and greater team learning over time.

Another element of remoteness that is inextricably linked to physical distance is technological disparity. Although remote teamwork necessitates the use of technology for collaboration, differences in the quality, use, and alignment of technology still act as an essential variable in determining the effectiveness of teamwork. For example, in teams where individuals share similar technical experiences, age differences had less of a negative impact on team creativity (Martins & Shalley 2011). Likewise, less media-rich forms of communication can lead to negative perceptions and misattributions among teammates (Burke et al. 1999). In this sense, the technology itself, as well as how teams use the technology, introduces meaningful variations in remoteness.

Finally, structural distance represents another form of remoteness that is inherent in physically remote team arrangements. Teams typically represent highly structured groups working together in predictable ways. However, structural arrangements and relations are altered in remote contexts where teams become unsituated in space and time. Aspects of work such as coordination and expectations that are more salient in a colocated workspace suddenly require more frequent and explicit communication to maintain (Oakman et al. 2020). Clear delineations between work and nonwork responsibilities become porous and malleable, resulting in both positive and negative worker outcomes (Kossek et al. 2006, Wheatley 2012).

Other people. In contrast to a team, the object of other people refers to the generalized collective of individuals and social relations that constitute a workplace (Raghuram & Wiesenfeld 2004, Rockmann & Pratt 2015). For example, a worker can be remote from individuals such as upper management and coworkers employed in the same organization but with whom they do not

necessarily interact or depend upon (Mayo et al. 2009, O'Neill et al. 2009, van Zoonen & Sivunen 2022). Other people can also refer to peripheral work relationships, such as clients, customers, or vendors (Brown & O'Hara 2003, Ipsen et al. 2021). Thus, to be remote from others means to be distant from the general assembly of colleagues who are all a part of the same organization or the peripheral individuals outside an organization with whom a worker may interact.

Like teams, other people are traditionally colocated in an office. Unlike members of a team who are interdependent and require frequent interaction and coordination, other people (e.g., coworkers, supervisors, clients, vendors) serve a much less critical function in one's ability to do one's job. However, this does not mean other people are not influential in one's work life. Like teammates, being physically distant from other people can manifest as various forms of distance but they are refracted differently due to distinct features of interpersonal, but not interdependent, relationships. Psychological distance can still lead to misunderstandings and misattributions of others' motives (Cramton 2001, Hinds & Bailey 2003). Additionally, remote workers identify less with coworkers when working apart from others (Baruch 2000). Remote workers also experience more scrutiny from supervisors and increased need for impression management (Barsness et al. 2005).

Temporal distance due to working in different time zones leads to difficulties with coordination and communication (Cramton & Webber 2005). Remote workers attempt to mitigate distance-based disadvantages by making themselves more visible, highly responsive, and available to decrease temporal distance (Cristea & Leonardi 2019, Richter 2020). However, being temporally distant from a workplace also affords some advantages regarding schedule flexibility for remote workers with other responsibilities (e.g., work-from-home mothers) and time savings from not having to commute (Hilbrecht et al. 2008).

The technologically mediated nature of remote work requires employees to alter their behaviors to either increase or decrease the perceived distance between themselves and coworkers (Leonardi et al. 2010). Workers also feel socially isolated due to a lack of social information in virtual media (van Zoonen & Sivunen 2022). Remote workers are often frustrated by the way others use their technology. For example, Karl and colleagues (2022) found that remote workers reported feeling frustrated by how coworkers used videoconferencing technology during meetings (e.g., failing to mute themselves) that were not in line with their preferences. Other studies found that telecommuting negatively impacted social exchange processes and job satisfaction, organizational commitment, and job performance of telecommuters, but that high-quality software mitigates these adverse job outcomes (Kuruzovich et al. 2021).

Finally, structural distance changes how individuals develop and maintain work-related routines and relationships. Although working remotely has advantages, structural ambiguity can lead to contradictory outcomes. In some cases, structural distance can increase perceptions of autonomy and perceptions of control over how to work (Boell et al. 2016, Gajendran & Harrison 2007). Alternatively, it may increase work-home conflict as boundaries blur (Kossek et al. 2006). Remote workers also experience difficulties establishing coordinated routines when lacking guidance or support from organizational leaders (Richter 2020). Individuals can also feel isolated, leading to diminished perceptions of respect (Bartel et al. 2012), decreased information exchange and social network closure (Yang et al. 2022), and reduced social network centrality (Barsness et al. 2005). In designing and adapting to remote work, researchers and managers need to consider the influence of social inputs in and beyond the office.

Symbolic resources. Lastly, the office encompasses symbolic resources. Drawing on symbolic interactionism, we define symbolic resources as objects and elements that constitute meaningful patterns in organizations (Blumer 1986). Although material resources refer to objects with enduring physical or instantiated forms, symbolic resources—such as boundaries and categories—rely

on the socially constructed meanings that individuals collectively use to make sense of their environments (Lawrence & Phillips 2019). Although symbolic resources are also enduring, they are separate from material resources in that the meaning of symbolic objects exists based on collective interpretation. In contrast, material resources possess an objective form or function that is separate from the meaning assigned to it.

Like material and social resources, researchers use different characterizations of remoteness when investigating what happens when workers are physically distant from the symbolic resources associated with the office. In most of these studies, researchers examine how workers interpret the office and its elements as symbolically representing what it means to be at work (Allen et al. 2021, Delanoeije et al. 2019, Golden & Veiga 2005). Thus, when characterizing remoteness as psychological, studies elaborate on how remote workers often develop new orientations and emotions when working at locations that are not the office (Anderson et al. 2015, Ipsen et al. 2021, Leonardi et al. 2010). For example, Bailey and colleagues' (2022) study found that remote workers who wore casual attire during Zoom meetings—attire that they would not typically wear at the office—experienced feelings of increased authenticity and engagement.

Considering temporal remoteness, studies similarly show that without the symbolic distinction of work time from nonwork time created by the office, individuals' schedules can extend into nonstandard hours such as weekends and holidays (Song & Gao 2020, Venkatesh & Vitalari 1992). Likewise, from the viewpoint of technological remoteness, because they are physically distant from the symbolic resources of the office that define the meaning of work, individuals must heavily rely on software and ICTs, which can result in alterations in communication (Fonner & Roloff 2010, Gibson et al. 2011). For example, Cristea & Leonardi (2019) found that employees at a satellite office physically distant from the company's headquarters that contained the symbolic seat of power used ICTs in attempts to establish technological closeness with their managers and signal their commitment and dedication. Lastly, when scholars consider structural remoteness, they highlight how, without the symbolism of the office as a collective place in which colleagues are together, remote workers may create new and disparate practices, such as attending to both nonwork and work activities throughout the day (e.g., Feng & Savani 2020, Kossek et al. 2006).

Common to this research, regardless of the characterization of remoteness, is the previously taken-for-granted symbolism of the office that has been brought to light in remote work. As the research demonstrates, in the meaning of the office and work in general, remoteness is now the object of constant reinterpretation and renegotiation.

WORK IN A WORLD OF REMOTENESS

After identifying dimensions of distance and characterizing the objects from which people are typically distant, we are well positioned to ask new questions about a world of work in which remoteness is ubiquitous. In the following section, we look to the literature to answer five questions about this new world of work: (*a*) Who will work remotely? (*b*) When will people work remotely? (*c*) Where will people work remotely? (*d*) Why will people work remotely? and (*e*) How will people work remotely? To each question, we propose answers grounded in both established and emerging research findings. Moreover, using the refraction framework outlined above, we explain how and why these answers arise and provide additional insights for researchers and managers considering how to approach remote work in organizations.

Who Will Work Remotely?

The existing literature has revealed many characteristics and situations that make individuals more or less likely to gravitate toward and be successful in remote work environments. Although

there are various possible combinations of these characteristics and situations, we highlight four categories of individuals who are most likely to engage in remote work: (*a*) individuals with nonwork obligations, (*b*) individuals with remote-relevant competencies, (*c*) individuals with remote-compatible jobs, and (*d*) individuals with barriers to accessing the office.

Individuals with nonwork obligations. Numerous studies have found that individuals with many nonwork obligations, such as caring for family members, prefer to work remotely because of the flexibility remote work affords in managing their home and life responsibilities (Hartig et al. 2007, Kossek et al. 2006, O'Neill et al. 2009, Song & Gao 2020). This flexibility occurs because individuals gain structural and temporal distance from the material and social aspects of the office. For instance, when not at the office, individuals have discretion over when to prioritize and attend to their nonwork responsibilities (Sardeshmukh et al. 2012). However, this flexibility also presents newfound challenges related to psychological distance and symbolic resources. Studies have found that remote workers with families often face difficulties maintaining boundaries between work and nonwork domains, leading to increased work-family conflict and interference (Galanti et al. 2021, Golden & Veiga 2005, Palumbo 2020, Raghuram & Wiesenfeld 2004). Thus, a critical consideration for this category is balancing the benefits of structural and temporal distance while mitigating the ramifications of psychological distance.

Individuals with remote-relevant competencies. There are several competencies that make specific individuals more effective and adaptable to remote work than others. These competencies include self-discipline, communication skills, initiative, adaptability, time management, prior remote work experience, and technical skills (Ayoko et al. 2012, Baruch 2000, Endrissat & Leclercq-Vandelannoitte 2021, Martins & Shalley 2011, O'Neill et al. 2014, Wang et al. 2021). Such competencies enable workers to navigate structural, technological, and psychological distance when physically separated from the office and its resources. For example, individuals with prior experience working remotely who possess effective technical and communicative skills can establish rapport with colleagues over virtual mediums despite the potential for technological and structural distance presented by ICTs (Martins & Shalley 2011, Raghuram & Wiesenfeld 2004). In contrast, without these competencies, remote workers struggle to overcome technological distance and also experience exacerbated psychological and structural distance from their colleagues (Raisiene et al. 2020, Wang et al. 2021). Therefore, a critical consideration for this category is identifying which remote workers may be lacking in these competencies and how to equip them with remote-relevant abilities and skills.

Individuals with remote-compatible jobs. In addition to remote work competencies, other studies have revealed that specific job roles will be better suited for remote work. Findings show that workers in jobs with less interdependence, clear task criteria, adequate provision of material resources, discretion, and established social connections have better remote work outcomes than individuals in jobs without these characteristics (Boell et al. 2016, Gibson et al. 2011, Golden & Gajendran 2019, Golden & Raghuram 2010, Kossek et al. 2006, van Zoonen et al. 2021). These remote-enabling job characteristics stymie workers' multiple challenges from structural, temporal, psychological, and technological distance. For example, remote workers whose employers do not provide adequate material or social resources often experience amplified psychological and technological distance (Bonacini et al. 2021, Carillo et al. 2021, Venkatesh & Vitalari 1992). On the other hand, individuals with straightforward job tasks and discretion can take advantage of being temporally and structurally distant from the material and symbolic aspects of the office to produce work on their terms without distraction or pretense (Aczel et al. 2021, Leonardi et al. 2010, Venkatesh & Vitalari 1992). In this category, researchers and organizations should evaluate

which roles can be converted to remote work and focus on how to design these jobs to enable remote workers.

Individuals with barriers to accessing the office. Finally, a few studies have identified that individuals facing barriers that prevent them from accessing the office will likely become remote workers. This research has highlighted the appeal of remote work for individuals with disabilities and those residing at substantial distances from the office where commuting is not feasible or they have limited alternative options to reaching the office (Ipsen et al. 2021, Mayo et al. 2009, Schur et al. 2020). Through our refraction framework, we can see how individuals benefit from remote work as it unburdens them from the constraining aspects of the office through temporal, psychological, and structural distance. For example, for individuals with disabilities, remote work affords the opportunity to work at one's own pace with personalized routines provided they have material and symbolic environments tailored to their needs and, perhaps, to avoid physical office spaces that are not easily navigable by the differently abled (Schur et al. 2020). However, challenges can also arise for remote workers, particularly regarding technological, structural, and psychological distance. For example, individuals residing in locations where remote work is their only feasible option must use ICTs to make their presence and work efforts known, resulting in difficulties in developing social capital (Hinds & Bailey 2003, Kuruzovich et al. 2021). This distance becomes even more salient when contrasting their experience to nonremote workers in the office who have more visibility because of the office's containment of symbolic and material resources (Barsness et al. 2005, Cristea & Leonardi 2019, Golden & Eddleston 2020). Thus, to ensure equity for remote workers who face barriers to going to the office, the main question is how to mitigate the negative impacts of distance and ensure that all workers have equal access to resources and opportunities.

When Will People Work Remotely?

To address the question of when people will work in remote work configurations, we look at research that examines how individuals choose to allocate their time and the factors that influence when people decide to work. In this section, we describe three main occasions that influence when remote workers decide to work: (*a*) when it is convenient, (*b*) when teammates are working, and (*c*) when people are watching.

When it is convenient. Several studies have demonstrated that one of the most beneficial aspects of remote work is a sense of increased autonomy and flexibility in choosing one's work schedule. This is especially advantageous for women with heavy domestic or childcare responsibilities (Hilbrecht et al. 2008, Kossek et al. 2006, Wheatley 2012). Although digital technologies afford more discretion in when and how to distribute home and work tasks, the outcomes vary. In some cases, having more control over the distribution of work and home tasks increased job satisfaction among teleworkers (Fonner & Roloff 2010, Vega et al. 2015, Venkatesh & Vitalari 1992, Wheatley 2012). In other cases, unbridled autonomy and access to work resources from home meant that workers were constantly engaged with work and felt unable to switch off (Felstead & Henseke 2017, Garrett & Danziger 2007, Song & Gao 2020). Both positive and negative outcomes of high levels of autonomy are consequences of increased temporal and structural distance that make it difficult to maintain healthy boundaries around when to work. When viewed through this framework, there are instances when increased temporal flexibility can benefit certain types of workers. Permeable boundaries around work schedules allow workers with many disparate and sometimes conflicting demands to optimize their work time while also tending to domestic responsibilities. However, with the increased structural distance that often comes with increased temporal

distance, organizations should be mindful of the potential paradoxical effects of allowing too much autonomy without also providing adequate structural support to make up for that which is lost in remote work configurations.

When teammates are working. Another theme of remote work research has to do with the challenges incurred when working in distributed teams, especially those with team members working across different time zones (Gibbs 2009). Working across temporal distance creates challenges for coordination (Cramton & Webber 2005) and has the potential to create psychological distance. For example, lack of coordination in virtual teams leads to feelings of frustration in teams that are highly interdependent, which is amplified by the degree of synchrony provided by available communication technologies (Rico & Cohen 2005). Conversely, more synchronized and spontaneous communication facilitates the development of stronger shared identity, which mitigates the negative effects of task and interpersonal conflict in distributed teams (Hinds & Mortensen 2005). These findings imply that by decreasing temporal distance in distributed teams, psychological distance is also leveraged. But what if decreasing temporal distance is not a feasible or practical option? Based on our framework, there are other ways organizations can mitigate the negative effects of temporal distance on team-level performance. For example, Erhardt and colleagues (2016) showed that by leveraging the affordances of email to communicate asynchronously, workers were able to spend more time thinking through ideas or questions before sending them to teammates, thus fostering more intentional knowledge-seeking behaviors and more constructive conflict resolution. In this sense, the added temporal space interjected between email communications acted as a psychological buffer, allowing individuals to surpass knee-jerk reactions to requests and, instead, identify root causes of conflict or misunderstandings. Interestingly, this example represents a case when increasing psychological distance as a result of temporal misalignment actually results in a positive outcome for team learning. Taken together, these findings demonstrate that there are multiple factors that influence when an individual might choose to engage with teammates with minimal temporal lag (e.g., for increased coordination or immediacy) and also when workers might prefer to work asynchronously (e.g., increased psychological buffer or time to analyze issues).

When people are watching. In addition to increasing temporal distance between coworkers and work teams, accompanying psychological and structural distance can create discrepancies in the amount of time remote workers spend working and the perception of their productivity among supervisors and managers. When the physical act of work is obscured, workers experience lower rates of promotion (Bloom et al. 2015). To combat this, some remote workers have adopted signaling behaviors to effectively convey commitment to the organization by being more available and responsive outside work hours (Cristea & Leonardi 2019). In doing so, they often sacrifice their personal lives, a negative consequence that often goes undetected by supervisors who only see increased engagement. This decreased visibility, in combination with increased autonomy and obfuscated work-home boundaries discussed above, results in workers extending work hours to make up for the potential disadvantages of working remotely. Unlike the previous factors that influence when workers decide to work, this implicit belief that "digital work means I have to prove my value" (Richter 2020) acts as more of a coercive force driving individuals' work schedule decisions in what Mazmanian and colleagues (2013) refer to as the autonomy paradox. Because workers are separated from the built-in structures provided by working in an office—for example, where their physical presence projects an impression of productivity or they can interact with coworkers and supervisors over work- and nonwork-related subject matter—remote workers are also bereaved of opportunities to build social capital. Thus, workers are pressured to find

alternative ways to decrease their structural and psychological distance from key members of their organization by adjusting their work hours to maximize visibility of their work.

Where Will People Work Remotely?

Remote work can occur at various locations beyond and including the traditional office. Not all remote workers work from home. We offer four broad categories of locations where people will work in a world of remoteness: (*a*) at home, (*b*) at the office, (*c*) on the road, and (*d*) in virtual environments. Then, using the refraction framework, we highlight benefits and challenges for individuals, managers, and organizations as workers migrate across and among these places.

At home. Home is the most common remote work location mentioned in the literature and will continue to be a prominent place where people will work remotely (Avgoustaki & Bessa 2019, Kossek et al. 2006, Palumbo 2020, Shimura et al. 2021). The benefits of working from home include convenience and autonomy as workers gain structural, psychological, and temporal distance from aspects of the office that are constraining or distracting (Bloom et al. 2015, Ipsen et al. 2021, Vega et al. 2015). For example, workers at home can have a greater sense of authenticity in their work by choosing what attire to wear because their home provides personalized material and symbolic features (Bailey et al. 2022). However, bringing work home also transforms aspects of work which can heighten negative experiences of distance. For instance, with workplace technologies and materials in their home, individuals may psychologically feel (and actually become) more highly scrutinized by management (Burbano & Chiles 2021, Halford 2005, Harris 2003, Sewell & Taskin 2015). Individual home environments can also differ in how conducive they are for remote work with respect to dedicated spaces and home offices (Avgoustaki & Bessa 2019). Managers and researchers should consider the implications of these differences in home environments, especially regarding workers with limited socioeconomic resources.

At the office. Remote workers do not work out of the office exclusively. There are occasions when even people who are permanently remote will be in the office. Other remote workers, such as those in hybrid work arrangements, spend part of their week in the office (Golden 2007, Morganson et al. 2010). To accommodate the hybridity of remote work, the office must be transformed, particularly in terms of its material, social, and symbolic resources. For instance, scheduling off-site meetings for remote workers can aid in reducing the lack of social connection that occurs from a structural, temporal, and psychological distance while also redefining the symbolic purpose of the office (Hinds & Cramton 2014). However, not adapting the office can result in escalating challenges mainly related to technological, psychological, and temporal distance. For example, divides can form between in-office and remote workers in how they view their work and with whom they develop social relationships (Millward et al. 2007, Morganson et al. 2010, Rockmann & Pratt 2015). Thus, organizations must adapt the office and the configuration of its resources to address various forms of distance, especially between remote and in-person workers.

On the road. With increasing access to broadband and organizational policies that allow workers more time away from the office, people are increasingly working from places that have not traditionally been considered locations of work. As illustrated by research on digital nomads and mobile workers, locations such as hotels, coworking offices, client sites, cafes, and beyond can be adapted into worksites (Brown & O'Hara 2003, Choudhury et al. 2021, Spinuzzi 2012, Thompson 2019). Some people have adopted a digital nomad approach to work in which they travel continuously and use any of the above-mentioned locations as perches from which to conduct their work tasks. Because any location has the potential to become a worksite, the consideration then becomes how these various locations are modified to facilitate work and the outcomes of these modifications.

For example, considering symbolic resources, organizations that facilitate a culture that values geographical distribution enable workers in various international locations to overcome temporal, technological, and psychological distance through actions such as idiosyncratic deals and focusing on work results rather than the amount of time employees spend working (Gajendran et al. 2015, Mayo et al. 2009). However, for workers to constantly transform various locations into worksites, especially those not materially or symbolically designed for the unique demands of their work, also presents challenges. For example, individuals can experience adverse effects of psychological and structural distance when they cannot segment work from nonwork (Allen et al. 2021). These psychological and structural challenges are especially acute for workers whose jobs have moral considerations as exemplified by Rauch & Ansari's (2022) study of remote military drone operators. It is important for organizations to recognize that, in a world of remote work, any location has the potential to become a worksite, and workers will need resources and systems to accommodate these various environments effectively.

In virtual environments. Virtual environments are places in which work happens, though they are decidedly nonphysical places when contrasted against the other locations discussed above. With alterations in material and social resources, virtual environments can offer significant benefits to minimize structural, psychological, and temporal distance associated with remote work. For example, virtual environments, like video conferencing and virtual worlds, have enabled novel ways of communication, coordination, and sharing (or not sharing) fundamentally different than in traditional office settings (Bosch-Sijtsema & Sivunen 2013, Collins et al. 2016, Dodgson et al. 2013, Karl et al. 2022). However, virtual environments can also exacerbate the challenges of remote work. For example, disparities in workers' skills in navigating virtual environments and lack of organizational support in setting up virtual environments can create more technological and structural distance (Carillo et al. 2021, Harris 2003). Ultimately, this can impact fundamental workplace dynamics such as knowledge exchange, how and why conflict arises, and how workers view their employers (Golden & Raghuram 2010, Hinds & Bailey 2003). Thus, managers and organizations must consider the choice and implementation of virtual environments to mitigate the challenges posed by altered resources and the multiple forms of distance.

Why Will People Work Remotely?

Two driving forces emerge when addressing why people work remotely: (*a*) external pressures and (*b*) internal preferences. As many workers experienced during the COVID-19 pandemic, transitioning to remote work was sudden, mandatory, and in some cases unwanted. But in other cases, working remotely is a choice based on personal preference or other individual factors. In this section, we discuss the external pressures that impel individuals to work remotely, as well as the internal preferences that motivate them to opt into remote work.

External pressures. The first force that decides individuals' remote work status is externally mediated factors such as managerial permission or situational necessity such as that induced by the COVID-19 pandemic. For example, studies by Kaplan and colleagues (2018) showed that managers' judgments about employees' conscientiousness and trustworthiness were the most important factors in driving managers' decisions to allow subordinates to work remotely. Alternatively, family obligations may necessitate more flexibility in work schedules to attend to nonwork-related responsibilities. Several studies have shown that home-based teleworkers reported greater levels of satisfaction due to increased flexibility in distributing home and work tasks than nonteleworkers (Fonner & Roloff 2010, Vega et al. 2015, Venkatesh & Vitalari 1992), a finding that is particularly pronounced for women for whom housework and childcare represent

disproportionate time constraints (Wheatley 2012). However, increased flexibility can also lead to decreased work effort because individuals attend to home responsibilities during the workday (Avgoustaki & Bessa 2019, Delanoeije et al. 2019), a finding that highlights the double-edged nature of remote work. External demands such as family obligations and the associated structural distance from symbolic resources (in this case, boundary constraints) will likely motivate individuals who would benefit from more flexibility to work remotely. In contrast, individuals who value achievement may desire more structural proximity to supervisors so their work is more salient when being considered for promotions and will therefore choose to work in the office. Of course, it is also possible that some organizations will close their physical offices entirely, thus making remote work mandatory. By understanding these differences, managers can more effectively personalize remote work structures to accommodate a variety of individual preferences, goals, and constraints.

Individual preferences. The second force that determines why people work remotely is individual-level needs, values, or preferences. For example, a field study by Bloom and colleagues (2015) randomly assigned a portion of workers of a Chinese travel company to work either from home or in the office. The results showed a significant increase in productivity and a sharp decrease in attrition for employees working from home. When the experiment concluded, workers were given the option to either remain working from home or return to the office. Interestingly, half of the original work-from-home group opted to return to the office, citing concerns over the social costs of remote working, indicating that workers learned about their own suitability for working from home. The other half, however, chose to remain working from home. One explanation is that different personality traits make remote work more efficient and enjoyable for some than others. O'Neill and colleagues (2009) found that more sociable individuals reported lower performance due to isolation, whereas workers with a higher need for autonomy reported higher levels of telework performance. The researchers also found that the need for achievement is more related to reported performance for nonteleworkers than for teleworkers, suggesting that workers are aware of the potential limitations for promotion and feedback while working remotely (Baruch 2000).

Taken together, these findings suggest that, although remote work may be conducive to those who need or prefer more autonomy and less supervision in their work, those who need more social interaction and visibility in their work will prefer to work in an office environment (Leonardi & Treem 2020). Our framework implies that individuals may experience both positive and negative outcomes of remote work depending on the degree to which the type of remoteness aligns with individual preferences; why individuals will choose to work remotely will depend on this fit. Those who experience isolation or loneliness from being psychologically distant from others in remote work configurations will not thrive in remote work arrangements and will likely choose to work in a colocated office, while those who have higher needs for autonomy find benefits in psychological separation from others and will prefer to work remotely.

How Will People Work Remotely?

The final question generated in this discussion of the future of remote work concerns how work will be performed in a world of remote work. In what ways will the process of working or behaviors of workers change in remote work settings? How will workers alter their work practices to execute work? To answer these questions, the research suggests four major ways that individuals will adjust their work practices: (*a*) greater reliance on technology, (*b*) changing ways of relating, (*c*) shifting identification processes, and (*d*) rewiring social networks.

Greater reliance on technology. The first way remote work changes how individuals perform work tasks is through a greater reliance, and oftentimes a necessary dependence, on technology.

The range of digital technologies available today offers a variety of tools that enable remote workers to effectively communicate with teammates, share and exchange information, and execute tasks. However, there are several factors that determine the efficacy of such technologies, such as synchronicity, technology practices, and media richness. For example, virtual teams perform better when synchronicity afforded by available communication technologies fits well with the level of interdependence required to complete tasks (Rico & Cohen 2005). Digital communication tools such as videoconferencing also enable home workers to learn more about coworkers' personal lives, thereby enhancing work relationships (Karl et al. 2022). Technology, however, can also hinder effective teamwork and lead to frustration when different individuals use tools in incompatible ways (Karl et al. 2022). This example of technological distance reveals the challenges of aligning technological practices despite using the same tool. Technological distance can also lead to increased psychological distance in that increased separation from the workplace facilitated by technology use creates a disconnect between workers and management (Leonardi et al. 2010). The richness of digital media also plays a role in mitigating the isolating effects of working through virtual mediums (van Zoonen & Sivunen 2022) where less rich media leads to negative perceptions and misattributions between teammates (Burke et al. 1999, Cramton 2001, Hinds & Bailey 2003). Similarly, the quality of software programs used to execute tasks is another important component that mitigates the negative effects of telework on job outcomes such as job satisfaction, organizational commitment, and job performance (Kuruzovich et al. 2021). Leonardi & Neeley (2022) suggest that the workers and leaders most equipped to succeed in remote work arrangements are those who can develop a digital mindset—or an approach that recognizes what affordances technologies offer and the willingness to experiment with using those affordances to create new communication practices attuned to the demands presented by distance.

Changing ways of relating. The second way individuals change how they work in remote work settings is in how they engage with others in work interactions. The increased psychological distance that accompanies remote work, where much or all of interpersonal interactions are mediated through technology, requires different activities and behaviors for building relationships compared to in-person interactions (McLarnon et al. 2019, Whillans et al. 2021). For example, a survey study by Jarvenpaa & Leidner (1999) showed that trust in distributed teams may be experienced as fragile and temporal (termed swift trust) with initial impressions of trust (or lack thereof) persisting throughout a project's lifetime. However, certain computer-mediated communication practices (specifically those conveying both task and social information) served to build trust when face-to-face interactions were limited. Because remote workers rely on technology to facilitate work relationships, individuals must now be mindful of potential forms of distance that accompany remote work if they hope to mitigate their negative effects. Because opportunities for spontaneous and informal work interactions are limited, individuals have less access to engage in networking and mentoring (Cooper & Kurland 2002). Remote workers also experience higher scrutiny and oversight by managers when away from the office (Barsness et al. 2005, Halford 2005), leading to altered work behaviors to manage impressions with supervisors (Cristea & Leonardi 2019), often through mastery of the company's official spoken language policies (Neeley 2013, 2021). Bailey and colleagues (2022) demonstrated that even something as inconsequential seeming as clothing choice (specifically forgoing office attire in favor of more casual home attire) has significant psychological impacts on remote workers' perception of authenticity, as well as organizational outcomes such as engagement.

Shifting identification processes. Another way individuals change how they work involves how individuals identify themselves in organizations. Remote work can be isolating when workers

are separated from colleagues with the resulting psychological distance manifesting in shifting identification processes. For example, globally distributed teams experience greater lack of trust due to heightened perceptions of differences (Nurmi & Hinds 2016) and often have problems determining if they should identify most strongly with people who work in close physical proximity to them or to a more abstract organizational culture that seems to predominate in the organization's headquarters (Leonardi & Rodriguez-Lluesma 2013). Remote workers also tend to identify more closely with those in similar work situations as themselves or with their organization, and less with other coworkers (Baruch 2000, Millward et al. 2007, Rockmann & Pratt 2015). One study by Bartel and colleagues (2012) found that workers' perceptions of respect (the extent to which one is included and valued as a member of the organization) were negatively associated with the degree of physical isolation experienced by virtual workers, and that respect mediated the relationship between physical isolation and organizational identification. Remote workers are also less effective at developing team-based mindsets and shared mental models due to lack of communication (Burke et al. 1999), as well as having a greater inclination to build social support relationships with other remote workers while increasing distance from in-office colleagues and having fewer social support relationships compared to colocated workers overall (Collins et al. 2016, Ipsen et al. 2021, Leonardi et al. 2010). When considering these identity-based challenges that come with working remotely, developing effective ways to decrease psychological distance experienced by remote workers would likely serve to mitigate many of the negative effects associated with remote work.

Rewiring social networks. Remote and hybrid work have the potential to shape how employees communicate with each other, thus posing opportunities or threats to one's social networks at work. Research on remote and hybrid work arrangements during the COVID-19 pandemic showed that it is common for workers who increase their frequency of working remotely to strengthen ties with their immediate workgroup members and either weaken or abandon ties with individuals in other parts of the organization (Wu et al. 2021, Yang et al. 2022, Zuzul et al. 2021). Thus, some scholars speculate that in remote and hybrid work arrangements, workers will have fewer strong ties with individuals outside of their immediate workgroups with whom they would benefit from receiving or sharing knowledge (Arena et al. 2022). Of course, organizations benefit when workers share knowledge with one another. And so too do the people who are the knowledge seekers and the knowledge sources. Because prior studies have found support for a "matching hypothesis" (Reagans & McEvily 2003, p. 262), in which knowledge sharing is perceived by those involved to be most successful when the strength of their relationship matches the complexity of the knowledge to be shared, the fact that people who are increasingly working remotely have few strong ties across the organization may pose problems for sharing important knowledge. One of those problems concerns a knowledge seeker's propensity to ask for the knowledge they need. Because asking for knowledge from the person who is the source of knowledge can put the seeker in a vulnerable position, seekers tend to feel most confident asking a source with whom they have a close and trusting relationship (Argote et al. 2003, Borgatti & Cross 2003). Knowledge seekers, however, may not know whether a source is willing to share and consequently may be hesitant to ask (Cabrera & Cabrera 2002). Further, asking for knowledge without knowing if the source is benevolent can be daunting because the act of asking can reveal the seeker's own inexperience or lack of expertise, which can damage their reputation (Abrams et al. 2003). To deal with these challenges, effective remote workers will need to either learn how to rewire their own social networks for success or find ways to use digital tools and other modes of collaboration and observation to find ways to access the ideas, resources, and relationships important to get work done (Keppler & Leonardi 2023).

TOWARD THE FUTURE OF RESEARCH ON REMOTE WORK: WHAT NOW?

Our review of the existing research on remote work reveals that various forms of distance from various resources create a world of work that is different from the world of work experienced by traditional office workers. This review has used the refraction framework to answer five questions important to both research and the practice of remote work today. But no review can cover everything. There are still many questions that need answering by future research. **Table 2** presents a summary of theoretical opportunities, methodological recommendations, and practical implications inspired by this review. Researchers may wish to consider the suggestions in **Table 2** as jumping-off points for further research on remote work. To push research on remote work further, we list several questions that seem to be the most logical next areas for researchers to explore with a focus on individual workers and the management of those workers based on our review of our current state of knowledge. For each question, we sketch out some tentative directions that build on existing research.

What Are the New Skills Workers Need to Navigate a World Powered by Remote Work?

In what follows, we outline five new skills that workers will need to develop to be successful remote workers.

Self-discipline and time management. Remote work requires individuals to manage their own schedules and priorities effectively. Being disciplined and having strong time management skills are crucial for staying organized and productive. What skills are the most effective?

Table 2 Summary of theoretical opportunities, methodological recommendations, and practical implications

For future research	Summary
Theoretical opportunities	How do the various forms of remoteness interact to produce different outcomes for remote workers? Do some forms of remoteness take priority at different times, in response to resource changes, or different contexts? What are the psycho-social and structural mechanisms that underlie remote work outcomes? What are the implications for boundaries between work and nonwork contexts in remote work settings? How do workers and organizations determine what the boundaries are? What new boundaries emerge, given that the office becomes less central?
Methodological recommendations	Existing research on remote work tends to aggregate all forms of distance into one construct. Studies should focus on specific forms of remoteness to understand their differential effects on remote workers in varied contexts. Scholars should develop consistent and accurate measures of the different constructs and forms of remoteness. Researchers can use and develop new hybrid and mixed method approaches combining qualitative and quantitative data (e.g., analysis of digital exhaust, field and laboratory experiments, social network analysis, etc.) to capture emergent phenomena and assess the causality of remote work.
Practical implications	Managers should identify the specific forms of remoteness that are impacted by their unique remote work context and the types of resources that are affected to address the unique challenges their organizations and workers face. Managers should factor in their organization's psychological, social, temporal, technological, and structural dynamics when planning, ensuring they minimize potential pitfalls and harness the benefits of remote work. To excel in remote work, employees must cultivate new skills and expertise; organizations can facilitate this learning and training, but workers must also be proactive in developing and practicing these competencies.

Communication skills. Effective communication is essential in remote work settings, as misunderstandings can easily arise. Workers should be proficient in both written and verbal communication and be comfortable using various communication tools and platforms. What kinds of communicative competencies are most important for navigating remote interactions?

Technical skills. Remote workers should be proficient with the technology and tools commonly used in their field, such as video conferencing platforms, project management software, file-sharing systems, and artificial intelligence. How do remote workers develop these skills? And what happens when skills are asymmetrically held by people in an organization?

Cross-cultural competence. Because remote work provides more opportunities to collaborate with team members from diverse backgrounds, workers should develop the ability to understand, appreciate, and work effectively with people from different cultures. What are the ways that culture shapes people's interactions with each other and interpretations of remote work arrangements?

Work-life balance. Remote work can blur the boundaries between personal and professional life. Workers should develop strategies to maintain a healthy work-life balance, such as setting boundaries and prioritizing self-care. How can work-life balance be maintained when work increasingly permeates people's home lives? Can and should the boundaries between them be maintained?

What Role Must Managers Play in Remote Work?

As post-pandemic life has demonstrated, there is great variance in the effectiveness of remote work. For remote work to succeed, managers must develop new skills that will enable remote work to work. Below we suggest four practices in which managers will need to engage to facilitate remote work in their organizations.

Facilitating open communication. Many studies encourage regular communication through various channels, such as video calls, instant messaging, and email. Setting up regular check-ins and team meetings to maintain a sense of connection and collaboration and seeding informal interactions seem important. But do these kinds of activities work to help overcome communication problems?

Promoting a culture of trust. Existing studies advocate that leaders should learn to trust employees to manage their time and workload effectively while avoiding micromanaging. But trust is usually built over time through multiplex interpersonal relations. Aside from some research on swift trust in virtual teams, we know little about how leaders can cultivate a strong sense of trust on teams. What are the practices and strategies that lead to the development of trust among people who rarely meet and have little information interaction?

Fostering a sense of belonging. How can leaders create a sense of belonging in teams and organizations in which people do not often meet in person? Some proponents suggest that strong organizational cultures mitigate problems of belonging. Others suggest that as we move toward more remote work arrangements, workers will become less attached to any particular organization, such that culture matters less. How do leaders encourage a sense of belonging when traditional tools of culture building are not available to them?

Choosing among various organizational arrangements for remote work. As we have highlighted throughout, many studies of remote work have examined various organizational arrangements that facilitate distance from important organizational resources. These arrangements can look quite different from one another—ranging from offshoring arrangements to fully remote arrangements to teams mixed with some people in the office and others remote. It is not

clear what the trade-offs are among these different kinds of organizational configurations and which ones serve organizational or team purposes the best. Future research is needed to untangle these relationships.

CONCLUSION

Reviewing the existing research on remote work has made clear that complexity increases when people work at a distance from the various resources provided by the office. The many studies about remote work in its varied forms that have been conducted over the past 25 years have allowed us to refract the concept of remoteness into dimensions of distance and to explore the ramifications of those dimensions on various aspects of people's work lives. We have a solid research foundation from which to advise leaders and managers on how to build strong remote organizations. But there is much research still to be done to understand the various ways in which remote work is changing the world of work.

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LITERATURE CITED

Abrams LC, Cross R, Lesser E, Levin DZ. 2003. Nurturing interpersonal trust in knowledge-sharing networks. *Acad. Manag. Exec.* 17(4):64–77. **https://doi.org/10.5465/ame.2003.11851845**

Aczel B, Kovacs M, van der Lippe T, Szaszi B. 2021. Researchers working from home: benefits and challenges. *PLOS ONE* 16(3):e0249127. **https://doi.org/10.1371/journal.pone.0249127**

Ajzen M, Taskin L. 2021. The re-regulation of working communities and relationships in the context of flex-work: a spacing identity approach. *Inform. Organ.* 31(4):100364. **https://doi.org/10.1016/j.infoandorg.2021.100364**

Allen TD, Merlo K, Lawrence RC, Slutsky J, Gray CE. 2021. Boundary management and work-nonwork balance while working from home. *Appl. Psychol.* 70(1):60–84. **https://doi.org/10.1111/apps.12300**

Anderson AJ, Kaplan SA, Vega RP. 2015. The impact of telework on emotional experience: When, and for whom, does telework improve daily affective well-being? *Eur. J. Work Organ. Psychol.* 24(6):882–97. **https://doi.org/10.1080/1359432X.2014.966086**

Arena MJ, Carroll GR, O'Reilly C, Golden J, Hines S. 2022. The adaptive hybrid: innovation with virtual work. *Connect. Commons* 2(1):2–10

Argote L, McEvily B, Reagans R. 2003. Managing knowledge in organizations: an integrative framework and review of emerging themes. *Manag. Sci.* 49(4):571–82. **https://doi.org/10.1287/mnsc.49.4.571.14424**

Avgoustaki A, Bessa I. 2019. Examining the link between flexible working arrangement bundles and employee work effort. *Hum. Resour. Manag.* 58(4):431–49. **https://doi.org/10.1002/hrm.21969**

Ayoko OB, Konrad AM, Boyle MV. 2012. Online work: managing conflict and emotions for performance in virtual teams. *Eur. Manag. J.* 30(2):156–74. **https://doi.org/10.1016/j.emj.2011.10.001**

Bailey DE, Kurland NB. 2002. A review of telework research: findings, new directions, and lessons for the study of modern work. *J. Organ. Behav.* 23(4):383–400. **https://doi.org/10.1002/job.144**

Bailey ER, Horton CB, Galinsky AD. 2022. Enclothed harmony or enclothed dissonance? The effect of attire on the authenticity, power, and engagement of remote workers. *Acad. Manag. Discov.* 8(3):341–56. **https://doi.org/10.5465/amd.2021.0081**

Barsness ZI, Diekmann KA, Seidel M-DL. 2005. Motivation and opportunity: the role of remote work, demographic dissimilarity, and social network centrality in impression management. *Acad. Manag. J.* 48(3):401–19

Bartel CA, Wrzesniewski A, Wiesenfeld BM. 2012. Knowing where you stand: physical isolation, perceived respect, and organizational identification among virtual employees. *Organ. Sci.* 23(3):743–57. **https://doi.org/10.1287/orsc.1110.0661**

Baruch Y. 2000. Teleworking: benefits and pitfalls as perceived by professionals and managers. *New Technol. Work Employ.* 15(1):34–49. **https://doi.org/10.1111/1468-005X.00063**

Bloom N, Liang J, Roberts J, Ying ZJ. 2015. Does working from home work? Evidence from a Chinese experiment. *Q. J. Econ.* 130(1):165–218. **https://doi.org/10.1093/qje/qju032**

Blumer H. 1986. *Symbolic Interactionism: Perspective and Method*. Berkeley: Univ. California Press

Boell SK, Cecez-Kecmanovic D, Campbell J. 2016. Telework paradoxes and practices: the importance of the nature of work. *New Technol. Work Employ.* 31(2):114–31. **https://doi.org/10.1111/ntwe.12063**

Bonacini L, Gallo G, Scicchitano S. 2021. Working from home and income inequality: risks of a 'new normal' with COVID-19. *J. Popul. Econ.* 34(1):303–60. **https://doi.org/10.1007/s00148-020-00800-7**

Borgatti SP, Cross R. 2003. A relational view of information seeking and learning in social networks. *Manag. Sci.* 49(4):432–45. **https://doi.org/10.1287/mnsc.49.4.432.14428**

Bosch-Sijtsema PM, Sivunen A. 2013. Professional virtual worlds supporting computer-mediated communication, collaboration, and learning in geographically distributed contexts. *IEEE Trans. Prof. Commun.* 56(2):160–75. **https://doi.org/10.1109/TPC.2012.2237256**

Brown B, O'Hara K. 2003. Place as a practical concern of mobile workers. *Environ. Plan. Econ. Space* 35(9):1565–87. **https://doi.org/10.1068/a34231**

Burbano VC, Chiles B. 2021. Mitigating gig and remote worker misconduct: evidence from a real effort experiment. *Organ. Sci.* 33(4):1273–99. **https://doi.org/10.1287/orsc.2021.1488**

Burke K, Aytes K, Chidambaram L, Johnson JJ. 1999. A study of partially distributed work groups: the impact of media, location, and time on perceptions and performance. *Small Group Res.* 30(4):453–90. **https://doi.org/10.1177/104649649903000404**

Cabrera A, Cabrera EF. 2002. Knowledge-sharing dilemmas. *Organ. Stud.* 23:687–710. **https://doi.org/10.1177/0170840602235001**

Carillo K, Cachat-Rosset G, Marsan J, Saba T, Klarsfeld A. 2021. Adjusting to epidemic-induced telework: empirical insights from teleworkers in France. *Eur. J. Inform. Syst.* 30(1):69–88. **https://doi.org/10.1080/0960085X.2020.1829512**

Chong S, Huang Y, Chang C-H (D). 2020. Supporting interdependent telework employees: a moderated-mediation model linking daily COVID-19 task setbacks to next-day work withdrawal. *J. Appl. Psychol.* 105(12):1408–22. **https://doi.org/10.1037/apl0000843**

Choudhury P (R), Foroughi C, Larson B. 2021. Work-from-anywhere: the productivity effects of geographic flexibility. *Strateg. Manag. J.* 42(4):655–83. **https://doi.org/10.1002/smj.3251**

Collins AM, Hislop D, Cartwright S. 2016. Social support in the workplace between teleworkers, office-based colleagues and supervisors. *New Technol. Work Employ.* 31(2):161–75. **https://doi.org/10.1111/ntwe.12065**

Cooper CD, Kurland NB. 2002. Telecommuting, professional isolation, and employee development in public and private organizations. *J. Organ. Behav.* 23(4):511–32. **https://doi.org/10.1002/job.145**

Cramton CD. 2001. The mutual knowledge problem and its consequences for dispersed collaboration. *Organ. Sci.* 12(3):346–71. **https://doi.org/10.1287/orsc.12.3.346.10098**

Cramton CD, Webber SS. 2005. Relationships among geographic dispersion, team processes, and effectiveness in software development work teams. *J. Bus. Res.* 58(6):758–65. **https://doi.org/10.1016/j.jbusres.2003.10.006**

Cristea IC, Leonardi PM. 2019. Get noticed and die trying: signals, sacrifice, and the production of face time in distributed work. *Organ. Sci.* 30(3):552–72. **https://doi.org/10.1287/orsc.2018.1265**

Daft RL, Lengel RH. 1986. Organizational information requirements, media richness and structural design. *Manag. Sci.* 32(5):554–71. **https://doi.org/10.1287/mnsc.32.5.554**

Delanoeije J, Verbruggen M, Germeys L. 2019. Boundary role transitions: a day-to-day approach to explain the effects of home-based telework on work-to-home conflict and home-to-work conflict. *Hum. Relat.* 72(12):1843–68. **https://doi.org/10.1177/0018726718823071**

Dodgson M, Gann DM, Phillips N. 2013. Organizational learning and the technology of foolishness: the case of virtual worlds at IBM. *Organ. Sci.* 24(5):1358–76. **https://doi.org/10.1287/orsc.1120.0807**

Endrissat N, Leclercq-Vandelannoitte A. 2021. From *sites* to *vibes*: technology and the spatial production of coworking spaces. *Inform. Organ.* 31(4):100353. **https://doi.org/10.1016/j.infoandorg.2021.100353**

Erhardt N, Gibbs J, Martin-Rios C, Sherblom J. 2016. Exploring affordances of email for team learning over time. *Small Group Res.* 47(3):243–78. **https://doi.org/10.1177/1046496416635823**

Felstead A, Henseke G. 2017. Assessing the growth of remote working and its consequences for effort, well-being and work-life balance. *New Technol. Work Employ.* 32(3):195–212. **https://doi.org/10.1111/ntwe.12097**

Feng Z, Savani K. 2020. Covid-19 created a gender gap in perceived work productivity and job satisfaction: implications for dual-career parents working from home. *Gender Manag.* 35(7/8):719–36. **https://doi.org/10.1108/GM-07-2020-0202**

Fiol CM, O'Connor EJ. 2005. Identification in face-to-face, hybrid, and pure virtual teams: untangling the contradictions. *Organ. Sci.* 16(1):19–32. **https://doi.org/10.1287/orsc.1040.0101**

Flavián C, Guinalíu M, Jordán P. 2022. Virtual teams are here to stay: how personality traits, virtuality and leader gender impact trust in the leader and team commitment. *Eur. Res. Manag. Bus. Econ.* 28(2):100193. **https://doi.org/10.1016/j.iedeen.2021.100193**

Fonner KL, Roloff ME. 2010. Why teleworkers are more satisfied with their jobs than are office-based workers: when less contact is beneficial. *J. Appl. Commun. Res.* 38(4):336–61. **https://doi.org/10.1080/00909882.2010.513998**

Gajendran RS, Harrison DA. 2007. The good, the bad, and the unknown about telecommuting: meta-analysis of psychological mediators and individual consequences. *J. Appl. Psychol.* 92:1524–41. **https://doi.org/10.1037/0021-9010.92.6.1524**

Gajendran RS, Harrison DA, Delaney-Klinger K. 2015. Are telecommuters remotely good citizens? Unpacking telecommuting's effects on performance via i-deals and job resources. *Pers. Psychol.* 68(2):353–93. **https://doi.org/10.1111/peps.12082**

Galanti T, Guidetti G, Mazzei E, Zappalà S, Toscano F. 2021. Work from home during the COVID-19 outbreak. *J. Occup. Environ. Med.* 63(7):e426–32. **https://doi.org/10.1097/JOM.0000000000002236**

Garrett RK, Danziger JN. 2007. Which telework? Defining and testing a taxonomy of technology-mediated work at a distance. *Soc. Sci. Comput. Rev.* 25(1):27–47. **https://doi.org/10.1177/0894439306293819**

Gibbs J. 2009. Dialectics in a global software team: negotiating tensions across time, space, and culture. *Hum. Relat.* 62(6):905–35. **https://doi.org/10.1177/0018726709104547**

Gibson CB, Gibbs JL. 2006. Unpacking the concept of virtuality: the effects of geographic dispersion, electronic dependence, dynamic structure, and national diversity on team innovation. *Adm. Sci. Q.* 51(3):451–95. **https://doi.org/10.2189/asqu.51.3.451**

Gibson CB, Gibbs JL, Stanko TL, Tesluk P, Cohen SG. 2011. Including the "I" in virtuality and modern job design: extending the job characteristics model to include the moderating effect of individual experiences of electronic dependence and copresence. *Organ. Sci.* 22(6):1481–99. **https://doi.org/10.1287/orsc.1100.0586**

Golden T. 2007. Co-workers who telework and the impact on those in the office: understanding the implications of virtual work for co-worker satisfaction and turnover intentions. *Hum. Relat.* 60(11):1641–67. **https://doi.org/10.1177/0018726707084303**

Golden TD, Eddleston KA. 2020. Is there a price telecommuters pay? Examining the relationship between telecommuting and objective career success. *J. Vocat. Behav.* 116:103348. **https://doi.org/10.1016/j.jvb.2019.103348**

Golden TD, Gajendran RS. 2019. Unpacking the role of a telecommuter's job in their performance: examining job complexity, problem solving, interdependence, and social support. *J. Bus. Psychol.* 34(1):55–69. **https://doi.org/10.1007/s10869-018-9530-4**

Golden TD, Raghuram S. 2010. Teleworker knowledge sharing and the role of altered relational and technological interactions. *J. Organ. Behav.* 31(8):1061–85. **https://doi.org/10.1002/job.652**

Golden TD, Veiga JF. 2005. The impact of extent of telecommuting on job satisfaction: resolving inconsistent findings. *J. Manag.* 31(2):301–18. **https://doi.org/10.1177/0149206304271768**

Halford S. 2005. Hybrid workspace: re-spatialisations of work, organisation and management. *New Technol. Work Employ.* 20(1):19–33. **https://doi.org/10.1111/j.1468-005X.2005.00141.x**

Harris L. 2003. Home-based teleworking and the employment relationship: managerial challenges and dilemmas. *Pers. Rev.* 32(4):422–37. **https://doi.org/10.1108/00483480310477515**

Hartig T, Kylin C, Johansson G. 2007. The telework tradeoff: stress mitigation versus constrained restoration. *Appl. Psychol.* 56(2):231–53. **https://doi.org/10.1111/j.1464-0597.2006.00252.x**

Hilbrecht M, Shaw SM, Johnson LC, Andrey J. 2008. 'I'm home for the kids': contradictory implications for work–life balance of teleworking mothers. *Gender Work Organ.* 15(5):454–76. **https://doi.org/10.1111/j.1468-0432.2008.00413.x**

Hill R, Betts LR, Gardner SE. 2015. Older adults' experiences and perceptions of digital technology: (dis)empowerment, wellbeing, and inclusion. *Comput. Hum. Behav.* 48:415–23. **https://doi.org/10.1016/j.chb.2015.01.062**

Hinds PJ, Bailey DE. 2003. Out of sight, out of sync: understanding conflict in distributed teams. *Organ. Sci.* 14(6):615–32. **https://doi.org/10.1287/orsc.14.6.615.24872**

Hinds PJ, Cramton CD. 2014. Situated coworker familiarity: how site visits transform relationships among distributed workers. *Organ. Sci.* 25(3):794–814. **https://doi.org/10.1287/orsc.2013.0869**

Hinds PJ, Mortensen M. 2005. Understanding conflict in geographically distributed teams: the moderating effects of shared identity, shared context, and spontaneous communication. *Organ. Sci.* 16(3):290–307. **https://doi.org/10.1287/orsc.1050.0122**

Ipsen C, van Veldhoven M, Kirchner K, Hansen JP. 2021. Six key advantages and disadvantages of working from home in Europe during COVID-19. *Int. J. Environ. Res. Public Health* 18(4):1826. **https://doi.org/10.3390/ijerph18041826**

Jarvenpaa SL, Leidner DE. 1999. Communication and trust in global virtual teams. *Organ. Sci.* 10(6):791–815. **https://doi.org/10.1287/orsc.10.6.791**

Kaplan S, Engelsted L, Lei X, Lockwood K. 2018. Unpackaging manager mistrust in allowing telework: comparing and integrating theoretical perspectives. *J. Bus. Psychol.* 33(3):365–82. **https://doi.org/10.1007/s10869-017-9498-5**

Karl KA, Peluchette JV, Aghakhani N. 2022. Virtual work meetings during the COVID-19 pandemic: the good, bad, and ugly. *Small Group Res.* 53(3):343–65. **https://doi.org/10.1177/10464964211015286**

Keppler SM, Leonardi PM. 2023. Building relational confidence in remote and hybrid work arrangements: novel ways to use digital technologies to foster knowledge sharing. *J. Comput.-Mediat. Commun.* 28(4):zmad020. **https://doi.org/10.1093/jcmc/zmad020**

Kossek EE, Lautsch BA, Eaton SC. 2006. Telecommuting, control, and boundary management: correlates of policy use and practice, job control, and work–family effectiveness. *J. Vocat. Behav.* 68(2):347–67. **https://doi.org/10.1016/j.jvb.2005.07.002**

Kuruzovich J, Paczkowski W "P," Golden TD, Goodarzi S, Venkatesh V. 2021. Telecommuting and job outcomes: a moderated mediation model of system use, software quality, and social exchange. *Inform. Manag.* 58(3):103431. **https://doi.org/10.1016/j.im.2021.103431**

Lapierre LM, van Steenbergen EF, Peeters MCW, Kluwer ES. 2016. Juggling work and family responsibilities when involuntarily working more from home: a multiwave study of financial sales professionals. *J. Organ. Behav.* 37(6):804–22. **https://doi.org/10.1002/job.2075**

Lawrence TB, Phillips N. 2019. *Constructing Organizational Life: How Social-Symbolic Work Shapes Selves, Organizations, and Institutions*. Oxford, UK: Oxford Univ. Press. 1st ed.

Leonardi PM. 2013. Theoretical foundations for the study of sociomateriality. *Inform. Organ.* 23(2):59–76. **https://doi.org/10.1016/j.infoandorg.2013.02.002**

Leonardi PM, Neeley T. 2022. *The Digital Mindset: What It Really Takes to Thrive in the Age of Data, Algorithms, and AI*. Boston: Harvard Bus. Rev.

Leonardi PM, Rodriguez-Lluesma C. 2013. Occupational stereotypes, perceived status differences, and intercultural communication in global organizations. *Commun. Monogr.* 80(4):478–502. **https://doi.org/10.1080/03637751.2013.828155**

Leonardi PM, Treem JW. 2020. Behavioral visibility: a new paradigm for organization studies in the age of digitization, digitalization, and datafication. *Organ. Stud.* 41(12):1601–25. **https://doi.org/10.1177/0170840620970728**

Leonardi PM, Treem JW, Jackson MH. 2010. The connectivity paradox: using technology to both decrease and increase perceptions of distance in distributed work arrangements. *J. Appl. Commun. Res.* 38(1):85–105. **https://doi.org/10.1080/00909880903483599**

Martins LL, Shalley CE. 2011. Creativity in virtual work: effects of demographic differences. *Small Group Res.* 42(5):536–61. **https://doi.org/10.1177/1046496410397382**

Maynard MT, Gilson LL. 2014. The role of shared mental model development in understanding virtual team effectiveness. *Group Organ. Manag.* 39(1):3–32. **https://doi.org/10.1177/1059601113475361**

Mayo M, Pastor J-C, Gomez-Mejia L, Cruz C. 2009. Why some firms adopt telecommuting while others do not: a contingency perspective. *Hum. Resour. Manag.* 48(6):917–39. **https://doi.org/10.1002/hrm.20322**

Mazmanian M, Orlikowski WJ, Yates J. 2013. The autonomy paradox: the implications of mobile email devices for knowledge professionals. *Organ. Sci.* 24(5):1337–57. **https://doi.org/10.1287/orsc.1120.0806**

McLarnon MJW, O'Neill TA, Taras V, Law D, Donia MBL, Steel P. 2019. Global virtual team communication, coordination, and performance across three peer feedback strategies. *Can. J. Behav. Sci./Rev. Can. Sci. Comport.* 51(4):207–18. **https://doi.org/10.1037/cbs0000135**

Millward LJ, Haslam SA, Postmes T. 2007. Putting employees in their place: the impact of hot desking on organizational and team identification. *Organ. Sci.* 18(4):547–59. **https://doi.org/10.1287/orsc.1070.0265**

Morganson VJ, Major DA, Oborn KL, Verive JM, Heelan MP. 2010. Comparing telework locations and traditional work arrangements: differences in work-life balance support, job satisfaction, and inclusion. *J. Manag. Psychol.* 25(6):578–95. **https://doi.org/10.1108/02683941011056941**

Nash C, Jarrahi MH, Sutherland W, Phillips G. 2018. Digital nomads beyond the buzzword: defining digital nomadic work and use of digital technologies. In *Transforming Digital Worlds*, ed. G Chowdhury, J McLeod, V Gillet, P Willett, pp. 207–17. Cham, Switz.: Springer. **https://doi.org/10.1007/978-3-319-78105-1_25**

Neeley T. 2013. Language matters: status loss and achieved status distinctions in global organizations. *Organ. Sci.* 24(2):476–97. **https://doi.org/10.1287/orsc.1120.0739**

Neeley T. 2021. *Remote Work Revolution: Succeeding from Anywhere*. New York: Harper Bus.

Nurmi N, Hinds PJ. 2016. Job complexity and learning opportunities: a silver lining in the design of global virtual work. *J. Int. Bus. Stud.* 47(6):631–54. **https://doi.org/10.1057/jibs.2016.11**

Oakman J, Kinsman N, Stuckey R, Graham M, Weale V. 2020. A rapid review of mental and physical health effects of working at home: How do we optimise health? *BMC Public Health* 20(1):1825. **https://doi.org/10.1186/s12889-020-09875-z**

O'Neill TA, Hambley LA, Chatellier GS. 2014. Cyberslacking, engagement, and personality in distributed work environments. *Comput. Hum. Behav.* 40:152–60. **https://doi.org/10.1016/j.chb.2014.08.005**

O'Neill TA, Hambley LA, Greidanus NS, MacDonnell R, Kline TJB. 2009. Predicting teleworker success: an exploration of personality, motivational, situational, and job characteristics. *New Technol. Work Employ.* 24(2):144–62. **https://doi.org/10.1111/j.1468-005X.2009.00225.x**

Palumbo R. 2020. Let me go to the office! An investigation into the side effects of working from home on work-life balance. *Int. J. Public Sector Manag.* 33(6/7):771–90. **https://doi.org/10.1108/IJPSM-06-2020-0150**

Raghuram S, Wiesenfeld B. 2004. Work-nonwork conflict and job stress among virtual workers. *Hum. Resour. Manag.* 43(2–3):259–77. **https://doi.org/10.1002/hrm.20019**

Raisiene A, Rapuano V, Varkulevičiūtė K, Stachová K. 2020. Working from home—Who is happy? A survey of Lithuania's employees during the COVID-19 quarantine period. *Sustainability* 12:5332. **https://doi.org/10.3390/su12135332**

Rauch M, Ansari S (S). 2022. Waging war from remote cubicles: how workers cope with technologies that disrupt the meaning and morality of their work. *Organ. Sci.* 33(1):83–104. **https://doi.org/10.1287/orsc.2021.1555**

Reagans R, McEvily B. 2003. Network structure and knowledge transfer: the effects of cohesion and range. *Adm. Sci. Q.* 48(2):240–67. **https://doi.org/10.2307/3556658**

Richter A. 2020. Locked-down digital work. *Int. J. Inform. Manag.* 55:102157. **https://doi.org/10.1016/j.ijinfomgt.2020.102157**

Rico R, Cohen SG. 2005. Effects of task interdependence and type of communication on performance in virtual teams. *J. Manag. Psychol.* 20(3/4):261–74. **https://doi.org/10.1108/02683940510589046**

Rockmann KW, Pratt MG. 2015. Contagious offsite work and the lonely office: the unintended consequences of distributed work. *Acad. Manag. Discov.* 1(2):150–64. **https://doi.org/10.5465/amd.2014.0016**

Sardeshmukh SR, Sharma D, Golden TD. 2012. Impact of telework on exhaustion and job engagement: a job demands and job resources model. *New Technol. Work Employ.* 27(3):193–207. **https://doi.org/10.1111/j.1468-005X.2012.00284.x**

Schur LA, Ameri M, Kruse D. 2020. Telework after COVID: a "silver lining" for workers with disabilities? *J. Occup. Rehabil.* 30(4):521–36. **https://doi.org/10.1007/s10926-020-09936-5**

Sewell G, Taskin L. 2015. Out of sight, out of mind in a new world of work? Autonomy, control, and spatiotemporal scaling in telework. *Organ. Stud.* 36(11):1507–29. **https://doi.org/10.1177/0170840615593587**

Shimura A, Yokoi K, Ishibashi Y, Akatsuka Y, Inoue T. 2021. Remote work decreases psychological and physical stress responses, but full-remote work increases presenteeism. *Front. Psychol.* 12:730969. **https://www.frontiersin.org/articles/10.3389/fpsyg.2021.730969**

Song Y, Gao J. 2020. Does telework stress employees out? A study on working at home and subjective well-being for wage/salary workers. *J. Happiness Stud.* 21(7):2649–68. **https://doi.org/10.1007/s10902-019-00196-6**

Spinuzzi C. 2012. Working alone together: coworking as emergent collaborative activity. *J. Bus. Tech. Commun.* 26(4):399–441. **https://doi.org/10.1177/1050651912444070**

Thompson BY. 2019. The digital nomad lifestyle: (remote) work/leisure balance, privilege, and constructed community. *Int. J. Sociol. Leisure* 2(1):27–42. **https://doi.org/10.1007/s41978-018-00030-y**

Trope Y, Liberman N. 2010. Construal-level theory of psychological distance. *Psychol. Rev.* 117(2):440–63. **https://doi.org/10.1037/a0018963**

van Zoonen W, Sivunen A, Blomqvist K, Olsson T, Ropponen A, et al. 2021. Factors influencing adjustment to remote work: employees' initial responses to the COVID-19 pandemic. *Int. J. Environ. Res. Public Health* 18(13):6966. **https://doi.org/10.3390/ijerph18136966**

van Zoonen W, Sivunen AE. 2022. The impact of remote work and mediated communication frequency on isolation and psychological distress. *Eur. J. Work Organ. Psychol.* 31(4):610–21. **https://doi.org/10.1080/1359432X.2021.2002299**

Vega RP, Anderson AJ, Kaplan SA. 2015. A within-person examination of the effects of telework. *J. Bus. Psychol.* 30(2):313–23. **https://doi.org/10.1007/s10869-014-9359-4**

Venkatesh A, Vitalari NP. 1992. An emerging distributed work arrangement: an investigation of computer-based supplemental work at home. *Manag. Sci.* 38(12):1687–706. **https://doi.org/10.1287/mnsc.38.12.1687**

Waizenegger L, McKenna B, Cai W, Bendz T. 2020. An affordance perspective of team collaboration and enforced working from home during COVID-19. *Eur. J. Inform. Syst.* 29(4):429–42. **https://doi.org/10.1080/0960085X.2020.1800417**

Wang B, Liu Y, Qian J, Parker SK. 2021. Achieving effective remote working during the COVID-19 pandemic: a work design perspective. *Appl. Psychol.* 70(1):16–59. **https://doi.org/10.1111/apps.12290**

Wheatley D. 2012. Good to be home? Time-use and satisfaction levels among home-based teleworkers. *New Technol. Work Employ.* 27(3):224–41. **https://doi.org/10.1111/j.1468-005X.2012.00289.x**

Whillans A, Perlow L, Turek A. 2021. Experimenting during the shift to virtual team work: learnings from how teams adapted their activities during the COVID-19 pandemic. *Inform. Organ.* 31(1):100343. **https://doi.org/10.1016/j.infoandorg.2021.100343**

Windeler JB, Chudoba KM, Sundrup RZ. 2017. Getting away from them all: managing exhaustion from social interaction with telework. *J. Organ. Behav.* 38(7):977–95. **https://doi.org/10.1002/job.2176**

Woo D, Endacott CG, Myers KK. 2022. Navigating water cooler talks without the water cooler: uncertainty and information seeking during remote socialization. *Manag. Commun. Q.* 37(2):251–80. **https://doi.org/10.1177/08933189221105916**

Workman M, Kahnweiler W, Bommer W. 2003. The effects of cognitive style and media richness on commitment to telework and virtual teams. *J. Vocat. Behav.* 63(2):199–219. **https://doi.org/10.1016/S0001-8791(03)00041-1**

Wu Y, Antone B, Srinivas A, DeChurch L, Contractor N. 2021. Teamwork in the time of COVID-19: creating, dissolving, and reactivating network ties in response to a crisis. *J. Appl. Psychol.* 106(10):1483–92. **https://doi.org/10.1037/apl0000969**

Yang L, Holtz D, Jaffe S, Suri S, Sinha S, et al. 2022. The effects of remote work on collaboration among information workers. *Nat. Hum. Behav.* 6(1):43–54. **https://doi.org/10.1038/s41562-021-01196-4**

Zuzul T, Pahnke EC, Larson J, Bourke P, Caurvina N, et al. 2021. Dynamic silos: increased modularity in intra-organizational communication networks during the Covid-19 pandemic. arXiv:2104.00641 [stat.ML]