Staying Engaged During the Remote Work Revolution: An Integrated Job Crafting Perspective

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Approval of the Dissertation Committee

This dissertation has been duly read, reviewed, and critiqued by the committee listed below, which hereby approves the manuscript of Christopher L. Chen as fulfilling the scope and quality requirements for meriting the degree of Doctor of Philosophy in Psychology (Organizational Behavior).

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Abstract

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Hybrid and remote workers now comprise nearly one-third of the working population in the U.S. and Canada (Barrero et al., 2021; StatCan, 2021), while employee engagement has dropped to its lowest point in a decade (Harter, 2023). It is now more crucial than ever to identify valuable strategies for individuals and organizations to increase engagement at work. Job crafting is a bottom-up approach to work design (Chen, 2022a, 2022b; Donaldson et al., 2021; Tims et al., 2012; Wrzesniewski & Dutton, 2001), extensively studied as a proactive employee behavior associated with increased engagement among other positive work outcomes (Lichtenthaler & Fischbach, 2019; Mukherjee & Dhar, 2022; Tims et al., 2012). However, job crafting can also be a “double-edged sword” (Harju et al., 2021), with promotion-focused (boundary expansion) behaviors contributing to engagement while prevention-focused (boundary reduction) behaviors detracting from engagement (Lichtenthaler & Fischbach, 2019). This dissertation is one of the first to investigate work engagement in the remote work context from an integrated promotion- and prevention-focused job crafting perspective (Tims et al., 2022).

A sample of (n = 433) hybrid and remote workers were recruited for this cross-sectional study using CloudResearch Connect. Structural Equation Modeling (SEM) was utilized to determine whether promotion- and prevention-focused job crafting mediated the relationship between remote work resources/demands and work engagement. Hierarchical regression was run to understand the moderating role of perceived job crafting success on the relationship between
job crafting and work engagement in *gain cycles* and *loss spirals*. Study findings supported the mediating role of promotion-focused job crafting on the relationship between remote work resources, demands, and engagement. Participants with high remote work resources and demands were found to engage in promotion-focused job crafting, while those with only high demands resorted to prevention-focused job crafting. Perceived job crafting success positively moderated the relationship between prevention-focused job crafting and work engagement.

In conclusion, organizations can increase work engagement and the formation of *gain cycles* by providing adequate remote work resources, such as increased visibility and social support, to encourage promotion-focused job crafting. At the same time, hindering remote work demands, such as professional isolation and technology overload, should be minimized to avoid the preponderance of prevention-focused job crafting behaviors associated with decreased engagement. Managers can help employees break out of self-sabotaging *loss spirals* by facilitating short-term reductions in work boundaries and offering additional resources to offset hindering demands. Additional insights based on the study findings are provided for individuals and organizations navigating the sea of changes brought about by the remote work modality.

*Keywords:* Job Crafting, Work Engagement, Remote Work, Telework, Regulatory Focus Theory, Job Demands-Resources, COR Theory, Gain Cycles, Loss Spirals
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Table of Contents

Approval of the Dissertation Committee ........................................................................ iii
Abstract ......................................................................................................................... iv
Acknowledgements......................................................................................................... vi
Table of Contents ........................................................................................................ vii

Chapter 1: Introduction ................................................................................................. 1
  Addressing Gaps in Remote Work Research ............................................................ 4
  Remote Work ............................................................................................................ 7
  Overview of Job Crafting Research ..................................................................... 9
    Prominent Job Crafting Theories ..................................................................... 11
    Diverging Role and Resource Perspectives ................................................ 14
    Promotion- and Prevention-focused Job Crafting ..................................... 16
  Job Crafting and Work Engagement ................................................................. 20

Chapter 2: Literature Review ...................................................................................... 22
  Literature Search Strategy ................................................................................... 22
    Selection Criteria ......................................................................................... 22
    Sample ....................................................................................................... 23
  Results ........................................................................................................... 23
    Work Engagement and Burnout ................................................................. 23
    Work Performance ..................................................................................... 25
    Job Satisfaction ......................................................................................... 27
    Organizational Commitment and Turnover ............................................ 28
    Fit ............................................................................................................ 29
  Discussion ....................................................................................................... 30
  Conclusion ....................................................................................................... 33

Chapter 3: Theoretical Model Development and Hypotheses ................................. 34
  Remote Work Resources .................................................................................. 36
    Autonomy ................................................................................................. 36
    Social Support .......................................................................................... 37
<table>
<thead>
<tr>
<th>Chapter 4: Methods</th>
<th>52</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample</td>
<td>52</td>
</tr>
<tr>
<td>Procedure</td>
<td>54</td>
</tr>
<tr>
<td>Measures</td>
<td>54</td>
</tr>
<tr>
<td>Job Autonomy</td>
<td>54</td>
</tr>
<tr>
<td>Social Support</td>
<td>55</td>
</tr>
<tr>
<td>Organizational Support</td>
<td>55</td>
</tr>
<tr>
<td>Feedback</td>
<td>55</td>
</tr>
<tr>
<td>Work-life Conflict</td>
<td>56</td>
</tr>
<tr>
<td>Professional Isolation</td>
<td>56</td>
</tr>
<tr>
<td>Techno-overload</td>
<td>56</td>
</tr>
<tr>
<td>Role Ambiguity</td>
<td>57</td>
</tr>
<tr>
<td>Job Crafting Behaviors</td>
<td>57</td>
</tr>
<tr>
<td>Perceived Job Crafting Success</td>
<td>59</td>
</tr>
<tr>
<td>Work Engagement</td>
<td>59</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chapter 5: Analyses and Results</th>
<th>59</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preliminary Data Analysis and Cleaning</td>
<td>59</td>
</tr>
<tr>
<td>Parallel Mediation Analysis</td>
<td>61</td>
</tr>
<tr>
<td>Moderation Analysis</td>
<td>65</td>
</tr>
<tr>
<td>Supplementary Analyses</td>
<td>68</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chapter 6: Discussion</th>
<th>72</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remote Work Resources and Work Engagement</td>
<td>72</td>
</tr>
<tr>
<td>Remote Work Demands and Work Engagement</td>
<td>73</td>
</tr>
<tr>
<td>Promotion- and Prevention-focused Job Crafting</td>
<td>74</td>
</tr>
<tr>
<td>Job Crafting Success</td>
<td>76</td>
</tr>
<tr>
<td>Theoretical Contributions</td>
<td>77</td>
</tr>
</tbody>
</table>
Chapter 1: Introduction

As nations across the globe continue to recover and adapt from the sudden upheaval caused by the COVID-19 health crisis, it is increasingly evident that many once thought to be temporary work modality changes will continue to persist in the post-pandemic world (Aksoy et al., 2022). While remote work arrangements grew alongside emerging information and communication technologies (ICTs) in the late 20th century (Tremblay & Thomsin, 2012), they were not prevalent before the COVID-19 pandemic. In the United States, for example, only ~3.9% of a representative sample (n = 33,250) of the working population were engaged in remote work in the years leading up to the pandemic, drastically leaping to 61.5% at the height of the stay-at-home orders from the government (Barrero et al., 2021). As Barrero and colleagues (2021) reported in their on-going longitudinal study, while the percentage of remote workers subsequently decreased with better control of the health crisis through early 2021, it has settled at ~30% and continues to remain steady through early 2023. These findings mirror those reported by the Canadian government (StatCan, 2021). As emphasized by Aksoy et al. (2022, p. 1), the large-scale adoption of remote work arrangements differs from other evolutions of jobs due to the rapid onset of the phenomenon:

No other episode in modern history involves such a pronounced and widespread shift in working arrangements in such a compressed time frame. The shift from farms and craft production to factory jobs that accompanied the Industrial Revolution played out over roughly two centuries. The later, ongoing shift from factory work and other goods production to services is many decades in the making. While these previous transitions brought greater changes in skill requirements and business operations, their comparatively slow unfolding afforded much more scope for gradual adjustment.
In light of this new revolution in work modalities, calls for research emphasize the importance of determining whether traditional top-down approaches and bottom-up approaches to job redesign continue to be effective in promoting desired work outcomes in the post-COVID-19 era (Galanti et al., 2021; Kniffin et al., 2021). Some researchers argue that top-down approaches are ill-suited for the modern workplace due to being inflexible to the rapid changes and increased employee specialization brought on by technological advances and new ways of working (Roczniewska et al., 2023). On the other hand, bottom-up solutions may be better at accounting for the dynamisms and diversity of the modern work context due to them being driven by the employees themselves. One well-studied and promising bottom-up approach to job redesign is job crafting, which encompasses proactive behaviors employees use to expand or reduce their job boundaries (Chen, 2022b, 2022a; Donaldson et al., 2021; Roczniewska et al., 2023; Tims et al., 2012; Wrzesniewski & Dutton, 2001). In the traditional work context, job crafting behaviors and interventions are often associated with a variety of positive work outcomes (Mukherjee & Dhar, 2022) such as:

- **Increased work engagement** and **decreased burnout** (Bakker et al., 2012, Gordon et al., 2018, Oprea et al., 2019, Rudolph et al., 2017, Tims et al., 2015, Tims et al., 2013, van Wingerden et al., 2017, Vogt et al., 2016)

- **Increased job satisfaction** (Rudolph et al., 2017; Slemp & Vella-Brodrick, 2013; Tims, Bakker, & Derks, 2013)

- **Improved job performance** (Bakker et al., 2012; Dierdorff & Jensen, 2018; Gordon et al., 2018; Lee & Lee, 2018; Tims et al., 2012; Tims et al., 2015; Rudolph et al., 2017)

- **Heightened organizational commitment** (Leana et al., 2009)

- **Lower turnover intentions** (Lichtenthaler & Fischbach, 2016).
While job crafting research in the context of remote work continues to be nascent, emerging studies have found promising results. A recent study by Ingusci and colleagues (2021) outlined evidence that job crafting improves the well-being of employees transitioning to remote work, reducing the effect of workload perception on behavioral stress by 17.53%. While Saragih et al. (2021) did not detect a significant direct effect between autonomy and well-being amongst remote workers, they found job crafting to mediate the relationship between autonomy and well-being positively. A recent three-wave longitudinal study reported an interaction effect between the type of job crafting behaviors and remote workers’ engagement (Costantini & Rubini, 2021). Specifically, job crafting towards more organized work processes leads to higher work engagement, while job crafting towards role reduction leads to lower work engagement. My prior study on job crafting in the remote context discovered similar results in that most components of expansion-oriented crafting were positively related to work engagement, while reduction-oriented behaviors had non-significant, but negative relationships with engagement (Chen, 2022b). Liu and colleagues (2021) found telework to improve job performance through job crafting in their six-month longitudinal study on employees working remotely during the COVID-10 pandemic. The authors contend that individuals utilized the increased autonomy gained while remote working to redesign their job boundaries towards better work performance. The four studies provide strong evidence that expansion-oriented job crafting should continue to be a useful bottom-up approach to job redesign in remote work by both bolstering benefits and helping ameliorate challenges.

Through my work as a talent consultant, one of the most frequently identified pain points with clients navigating this rapidly changing nature of work is decreasing levels of engagement and higher burnout. My anecdotal observations are consistent with recently published empirical
evidence on the downward trend in work engagement. Gallup recently reported that while the ratio of engaged to disengaged workers reached a record high in 2019, it has steadily declined every year starting in 2020 (Harter, 2023). Even more concerning, regardless of industry, the number of engaged workers is at its lowest point since 2013. While other factors are indubitably involved, it is interesting that this trend closely mirrors the widespread adoption of remote work arrangements. Work engagement has been found to decrease over time with greater uptake of remote work (Masuda et al., 2017). One explanation of this finding is that remote workers experienced decreased success at accomplishing their goals, leading to lower engagement. Remote workers who reported high goal attainment retained the same levels of work engagement longitudinally. Despite experiencing increased autonomy, Sardeshmukh and colleagues (2012) found remote workers less engaged and more exhausted due to diminished work resources and increased demands.

Addressing Gaps in Remote Work Research

As identified through the literature review in Chapter 2, work engagement is one of the most widely studied job crafting outcomes in traditional work contexts. However, to my knowledge, only two peer-reviewed studies examining job crafting and work engagement in the remote work context exist to date (Costantini & Rubini, 2021; Stempel & Siestrup, 2022). Of the extant research, only Costantini and Rubini (2021) investigates reduction-oriented job crafting behaviors in their study. The study, however, uses a very narrow definition of job crafting that does not fit with prevalent job crafting theories. Essential aspects of job crafting such as expanding and reducing social boundaries are neglected. These omissions are concerning for two reasons. From a research perspective, none of the existing studies fully capture the components of job crafting as it has been theorized and tested with work engagement in prior research,
providing only a piecemeal understanding of job crafting behaviors in the emerging remote work context. From a practitioner's perspective, studying job crafting as only expansion-oriented behaviors may impart the dangerous notion to managers and employees that all types of job crafting are beneficial. Extensive evidence shows that reduction-oriented job crafting behaviors negatively impact work engagement and other work outcomes (Harju et al., 2021; Lichtenthaler & Fischbach, 2019). Indeed, Costantini and Rubini (2021) found role reduction to be negatively related to work engagement in their study. One prevailing explanation of this negative relationship is that reduction behaviors are often unsuccessful, and it is the perceived failure of efforts which contribute to lower engagement (Lichtenthaler & Fischbach, 2019). However, the moderating role of job crafting success has also not yet been studied in the remote work context. Given the vital need to further research job crafting and work engagement in the context of remote work, this dissertation answered the following research questions:

1. How are promotion and prevention-focused job crafting related to work engagement in the remote working population?
2. How are remote work resources and demands related to work engagement?
3. What role does job crafting play in the relationship between remote work resources, demands, and work engagement?
4. To what extent does the perceived success of job crafting activities moderate the relationship between job crafting and its outcomes?

This dissertation investigated the relationship between remote work resources, demands, job crafting, and work engagement through three primary frameworks. First, I used regulatory focus theory to differentiate job crafting into promotion-and prevention-focused behaviors. Regulatory focus theory describes a promotion focus as an inclination towards “advancement,
growth, and accomplishment, whereas a prevention focus is concerned with security, safety, and responsibility” (Crowe & Higgins, 1997, p. 117). In job crafting, promotion-focused crafting encompasses approach behaviors that expand aspects of a job toward desired outcomes. In contrast, prevention-focused job crafting encompasses avoidant behaviors that prevent adverse outcomes, such as reducing boundaries or focusing on critical aspects of one’s job (Bindl et al., 2019). As existing remote work job crafting studies (Ingusci et al., 2021; Saragih et al., 2021) operationalize job crafting as a single overarching construct or focus on select components (Costantini & Rubini, 2021), this dissertation is one of the first to examine promotion and prevention-focused job crafting in the remote work context known to date (Tims et al., 2022).

Second, I adopted the job demands-resources (JDR; Bakker & Demerouti, 2007) model as a framework to integrate the remote work context as resources and demands. The JDR model explains the balance between job demands and resources and their effects on employee well-being. Job demands increase strain and lead to adverse organizational outcomes such as burnout. On the other hand, job resources buffer job demands by increasing motivation and leading to positive organizational outcomes such as work engagement. Based on the JDR model, Tims et al.'s (2012) conceptualization of job crafting posits that employees experiencing an imbalance between their job demands and resources will utilize crafting strategies to regain balance. These strategies include increasing job resources to offset demands and decreasing hindering job demands to match received job resources. Furthermore, job crafters may increase challenging job demands to offset boredom, develop KSAOs, and increase self-efficacy. Using the JDR perspective, this dissertation aimed to provide a deeper understanding of how remote work resources and demands impact work engagement and utilization of promotion and prevention-focused job crafting.
Third, I used the conservation of resources (COR; Hobfoll, 1989) theory to investigate how remote work resources impact the preponderance and success of promotion and prevention-focused job crafting strategies. COR theory describes the fundamental human motivation to acquire new resources while defending existing resources. Individuals with more resources tend to take higher calculated risks to gain resources (i.e., promotion-focused behaviors), acquiring even more resources in gain cycles (Halbesleben et al., 2014). In contrast, those with fewer resources tend to use costly and often unsuccessful attempts to conserve their current resources (i.e., prevention-focused behaviors) in loss spirals (Hobfoll, 1989; Lichtenthaler & Fischbach, 2019). Promotion-focused job crafting often results in gain cycles, leading to higher positive work affect such as work engagement, while prevention-focused job crafting is associated with loss spirals and negative work affect such as burnout and decreased work engagement (Lichtenthaler & Fischbach, 2019).

In the following section, I provide an overview of the remote work context, job crafting, and work engagement. The subsequent chapter reviews extant job crafting research and discusses how it led to my dissertation topic. Subsequently, I present my theoretical model, its components, and hypotheses. I then describe my study methodology and results. Finally, I conclude with an in-depth discussion of findings, practical implications, limitations, and future directions.

Remote Work

The phenomenon of remote work is conceptualized through various related terms such as virtual work, e-work, telework, telecommuting, mobile working, agile working, new-ways-of-working (NWW), and work-from-home (WFH). Although there are minute differences between terminologies, remote work generally refers to formal work arrangements in which an individual engages work tasks at home or other locations outside his or her main group office through ICTs
(Grant et al., 2019; Tremblay & Thomsin, 2012). As such, individuals in certain professions that conduct most of their labor outside of the office, such as construction workers, are not usually considered remote workers because ICTs do not play a significant role in their jobs. While some remote work arrangements allow employees to never physically be in the office, hybrid work arrangements where workers split their time working on-site and remotely are more prevalent (Aksoy et al., 2022).

Hybrid and fully remote workers experience many benefits, such as increased autonomy, work schedule flexibility, work-life balance, efficiency, productivity, work satisfaction, decreased colleague interference, and less loss of time to commuting/traveling compared to their entirely in-person counterparts (Beňo, 2021; Ingusci et al., 2022; Tremblay & Thomsin, 2012; Wang et al., 2021). On the other hand, there are also negative consequences associated with this new way of working. Due to fewer in-person interactions with managers and colleagues, remote workers often contend with increased feelings of social isolation, professional isolation, fear of reduced visibility in their organizations, and decreased perceptions of career advancement opportunities (Golden, 2007; Golden et al., 2008; Ingusci et al., 2022; Toscano & Zappalà, 2020; Wang et al., 2021). As work and personal lives become increasingly intertwined, work-life, work-family, and family-work conflicts continue to be prevalent in the remote work context (Beňo, 2021; Grant et al., 2019; Ingusci et al., 2022). Described by the phenomena known as the connectivity paradox (Leonardi et al., 2010), ICTs that enable remote working also impart feelings of being constantly monitored, cause distractions, and promote technology-related stress (technostress; Ragu-Nathan et al., 2008) when misused or abused (Bondanini et al., 2020). In the same vein, as termed the autonomy paradox, high degrees of job flexibility afforded by remote work arrangements may be exploited by organizations or mismanaged by employees themselves,
creating higher workloads, increased work pressure, and heightened work-life conflict, resulting in diminished work efficiency and well-being (Saragih et al., 2021; Zhou, 2020).

Overview of Job Crafting Research

To understand the history of job crafting research, it is helpful to first examine the evolution of work. Before the industrial revolution, the notion of a job was understood differently from today. In primarily agrarian societies, work was intertwined with everyday life. People mostly worked together as a family unit, or within their communities, with no delineation between work and personal lives. Individuals were often responsible for multiple work roles, with significant autonomy in completing their daily tasks. After the industrial revolution, and for most of the 20th century, jobs became much more specialized and bureaucratic, with a clear delineation between work and personal lives. For example, a factory worker was expected to arrive at the beginning of his or her shift, complete a specific set of tasks, and leave at the end of the shift. Any deviation from this preset routine was not considered productive and often harshly penalized.

As one artifact of this bureaucratic approach to work, most research on aligning job parameters to promote positive personal and organizational outcomes is based on the top-down perspective of job redesign, centered around Hackman and Oldham's (1976) Job Characteristics Model (JCM). The JCM predicted internal work motivation, work performance, satisfaction with work, absenteeism, and turnover using the Motivating Potential Score (MPS). The MPS consists of a job’s skill variety, task identity, significance, autonomy, and feedback. While the JCM was and remains to this day a cornerstone for most work-outcome-related research, there is a need for a more holistic characterization for modern, constantly changing organizations (Barley & Kunda, 2001). From the end of the 20th century to modern times, an argument can be made that
numerous jobs are slowly returning to their pre-industrial roots. Employees are expected to take on various non-related responsibilities at work, with much more autonomy in completing their tasks. Now, especially with the rise of remote work approaches to jobs, work- and personal lives are again entwined, with no clear beginning and end of the work shift. This new evolution in work modalities is perhaps best evidenced by the recent shift in research on work-life balance to work-life integration (Williams et al., 2016). Therefore, a holistic understanding of jobs requires not only a top-down perspective of how the job is designed but also a bottom-up perspective of how individual workers perceive and engage in each aspect of their jobs.

Research on role rejection and role-making focus on understanding the employee experience from a bottom-up perspective and provides some precursors to job crafting. Johnson and Graen (1973) examined the organizational assimilation process from a multidimensional perspective, including whether a newcomer can modify their expectations and the expectations of those around them to reach a standard definition of his or her role. While role-making research provided novel insights into how employees may alter their jobs to be more satisfying, it was still limited by the bureaucratic perspectives of the time when the behavior was expected to be conducted in vertical supervisor-employee dyads (Cashman et al., 1976).

Another early attempt to provide a bottom-up view of a person's relationship with their job was the application of Social Identity Theory (SIT) to organizations, as postulated by Ashforth and Mael (1989). SIT refers to the phenomenon in which people classify themselves and those around them into various social groups. When applied to organizations, SIT presumes that individuals will create identities based on their work and the people they interact with on the job. Building upon SIT, Wrzesniewski and Dutton (2001) presented a bottom-up conceptualization of job crafting to complement job design. Wrzesniewski and Dutton argued
that contrary to the job design perspective, in which it is assumed that satisfied employees will take on more job responsibilities, the job crafting perspective hypothesized that employees would alter the boundaries of their work to become more satisfied with their jobs.

Wrzesniewski and Dutton's work on job crafting led to a plethora of theoretical and qualitative studies on the topic. However, few of these studies explored job crafting through a quantitative lens until Tims et al.'s (2012) development of a generalized job crafting scale by combining the original conceptualization of job crafting with the JDR Model (Bakker & Demerouti, 2007). While a few studies have introduced their operationalizations of Wrzesniewski and Dutton’s job crafting theory, most empirical job crafting studies are based on Tims and colleagues’ (2012) version of job crafting (Lichtenthaler & Fischbach, 2019).

Prominent Job Crafting Theories

Wrzesniewski and Dutton's (2001) model presents an overview of job crafting behaviors, starting with motivations and ending with hypothesized general effects. Three individual needs serve as the primary motivators for job crafting behaviors. First, employees need greater personal control over their jobs to inspire greater work meaning. Second, individuals experience a constant need to build and maintain a positive self-image. Third, the basic human need for human connection with others must be fulfilled.

The authors proposed that several factors moderate job crafting behaviors. Firstly, the degree of perceived opportunities for job crafting moderates the relationship between the motivators and the actual behaviors. This perception is informed by (1) the amount of task interdependence required by the job and (2) the level of autonomy implied by the extent of supervision a person receives. In a job that requires a high level of task interdependence, each task is interrelated with the work of others preceding the task and following the completion of
the task. Therefore, jobs with high task interdependence allow for fewer job crafting opportunities because deviations from task and relational boundaries have a heavier impact on others in the workplace.

Furthermore, jobs with less autonomy and those that require close supervision by a manager may understandably discourage job crafting behaviors. Individual differences in work orientations also affect how employees utilize job crafting. Those who perceive their work as a job, a set of tasks completed for payment, may engage in job crafting to maximize their monetary compensation. Individuals who recognize their work as part of their career, performing tasks as part of a long-term plan to reach a specific position in an organization or society, may focus their job crafting efforts on advancement opportunities. Finally, people who view their work as a calling, undertaking tasks to achieve more significant meaning and fulfillment in life, may engage in job crafting behaviors to achieve those goals.

Wrzesniewski and Dutton's (2001) conceptualization of job crafting comprises three dimensions. The first dimension revolves around changing the job’s task boundaries. Behaviors that fall under this dimension involve changing the amount, type, and scope of the tasks required in the job. For example, an aspiring software engineer may take on challenging projects involving a new coding language to gain proficiency in that domain. The second dimension involves changing relational boundaries by adjusting the quality or quantity of interactions with others. As such, a technical support specialist may decide to spend more effort building rapport with his or her clients instead of just focusing on the issue to be solved. The third dimension focuses on changing cognitive task boundaries, which involves shifting one’s perception of work as an individual process or part of a whole system. In this case, rather than just cleaning rooms, a
hotel housekeeper may adopt a broader view of their work and leave a personalized note in the room as it elevates the guests’ overall hotel experience.

While engagement in job crafting behaviors leads to the specific effects of altering the design of the job and the social environment at work, general effects such as changes in the meaning of work and work identity may be encountered over time. By reframing their purpose at work and changing their daily experiences to fit their needs better, individuals may feel that their work becomes more meaningful and fulfilling. Concurrently, these modifications prompt others at work to perceive and reflect these elements to the individual, helping create and facilitating the grounding of a desirable work identity.

While Wrzesniewski and Dutton’s conceptualization of job crafting sparked many theoretical and qualitative studies on the topic, it was not until Tims et al.’s (2012) Job Crafting Scale (JCS) that job crafting was operationalized for quantitative studies in the general population. Before the JCS, two scales were created to measure job crafting in specific groups. Ghitulescu (2006) proposed a job crafting scale targeting special education teachers, and Leana et al. (2009) designed a scale for individual and collaborative job crafting amongst K-5 educators. While these scales encompassed job crafting dimensions as proposed by Wrzesniewski and Dutton, most of their items were worded for the education industry context.

As such, it is unsurprising that most quantitative research on job crafting utilizes Tims et al.’s JCS. Tims and colleagues employ the Job Demands-Resources (JDR) model as the theoretical foundation of their scale. The JDR model explains the delicate balance between challenging/hindering job demands and job resources and their effect on employee strain and motivation (Bakker & Demerouti, 2007). Tims and colleagues’ (2012) 21-item JCS is comprised of four factors: (1) increasing structural job resources, (2) decreasing hindering job demands, (3)
increasing social job resources, and (4) increasing challenging job demands. Increasing structural job resources include behaviors related to personal learning, development, and autonomy. Decreasing hindering job demands addresses behaviors that lessen work's negative impacts, including tasks and the people with whom the individual interacts at work. Increasing social job resources involves seeking feedback and advice from supervisors and colleagues. Finally, increasing challenging job demands comprise behaviors encompassing taking on new opportunities and gaining a more holistic understanding of one’s job.

While Tims and colleagues were developing the JCS based on the JDR model, Slemp and Vella-Brodrick (2013) operationalized Wrzesniewski and Dutton’s original conceptualization of job crafting into the 15-item Job Crafting Questionnaire (JCQ). The JCQ is comprised of three factors operationalized from Wrzesniewski and Dutton’s dimensions of job crafting: (1) task crafting, (2) cognitive crafting, and (3) relational crafting. Task crafting includes behaviors around changing the type and scope of tasks to better align with one’s skills and interests. Cognitive crafting involves ascertaining the importance and purpose one’s work has on one’s life, the organization, and the broader community. Finally, relational crafting addresses behaviors to broaden one’s network and create deeper relationships.

_Diverging Role and Resource Perspectives_

Although Wrzesniewski and Dutton's (2001) theory of job crafting, Tims and colleagues' (2012) Job Crafting Scale, and Slemp and Vella-Brodrick's (2013) Job Crafting Questionnaire share many similarities, there are differences in how the authors approach the phenomenon. The most profound differences lie in the outcomes of each conceptualization of job crafting. Wrzesniewski and Dutton focus on achieving a more positive and aligned work role identity by changing the meaning of work through job crafting. Slemp and Vella-Brodrick also focus on
improving work role identity and meaning through the outcomes of organizational citizenship behaviors (OCBs), job satisfaction, and affective well-being. Thus, this conceptualization is increasingly referred to as the role perspective of job crafting (Bruning & Campion, 2018). While developing work identity and meaning has positive effects on the individual, Wrzesniewski and Dutton (2001) acknowledge that “whether this crafting [towards a more aligned work identity] is ‘good’ or ‘bad’ for the organization is an issue that is situationally dependent” (p. 180).

In contrast, Tims and colleagues’ conceptualization of job crafting focuses on achieving equilibrium between challenging/hindering job demands and resources, and their effects on employee strain and motivation (Bakker & Demerouti, 2007). As such, this conceptualization is often referred to as the resource perspective of job crafting (Bruning & Campion, 2018). The resource perspective of job crafting prioritizes increasing person-job fit, omitting the cognitive reframing aspect of job crafting from the conceptualization as it is seen as a passive coping strategy rather than an active behavior (Niessen et al., 2016; Slemp & Vella-Brodrick, 2013). This omission is the impetus behind the creation of the JCQ, with Slemp and Vella-Brodrick arguing that the JCS only focuses on behaviors towards improving task and relational boundaries and does not include changes in the perception of one’s work, which can also lead to similar improvements.

Another significant difference between role and resource job crafting perspectives arises when examining the expansion and reduction orientation of task and relational boundaries. Wrzesniewski and Dutton (2001) take a neutral approach in describing job crafting as changing these boundaries; however, their examples primarily reflect expanding one’s boundaries. Slemp and Vella-Brodrick (2013) include only neutral (e.g., “Change the scope or types of tasks that
you complete at work”) or expansion (e.g., “Introduce new work tasks that better suit your skills or interests”) oriented items in the task crafting dimension, and only expansion-oriented items (e.g., “Engage in networking activities to establish more relationships”) in the relational crafting dimension of the JCQ (p. 136). Disparately, Tims and colleagues (2012) include reduction-oriented behaviors in the decreasing hindering job demands dimension of the JCS (e.g., “I organize my work so as to minimize contact with people whose problems affect me emotionally”; p.177). The inclusion of reduction-oriented behaviors is emphasized by Mäkikangas (2018), who delineated active job crafters as those who partake in both expansion- and reduction-oriented job crafting behaviors and passive job crafters as those who only engaged in reduction-oriented job crafting behaviors. It is important to note the emergence of recent job crafting scales that have begun incorporating reduction-oriented behaviors into the framework espoused by Wrzesniewski and Dutton (Bindl et al., 2019; Niessen et al., 2016).

A further difference between the JCS and JCQ lies in the factor loadings of the items. In the JCQ, items are loaded into factors consistent with Wrzesniewski and Dutton's conceptualization of job crafting: task, cognitive, and relational crafting (Slemp & Vella-Brodrick, 2013). However, in the JCS, task-related items are loaded in three different factors: increasing structural job resources, decreasing hindering job demands, and increasing challenging job demands, while relationship-related items loaded in two factors: decreasing hindering job demands and increasing social job resources (Tims et al., 2012).

**Promotion- and Prevention-focused Job Crafting**

While scientists and practitioners have traditionally used job crafting as a singular overarching construct, the divergence between these perspectives has led researchers to investigate whether each theoretical approach represents a disparate set of distinct constructs.
(Zhang & Parker, 2019). In the first peer-reviewed empirical study of its kind examining the congruence between the two job crafting perspectives, Ebert and Bipp (2021) found very few similarities between the two models. An EFA conducted by the authors on Wrzesniewski and Dutton's (role) and Tims et al.'s (resource) conceptualizations of job crafting recommended a two- or five-factor solution. In the two-factor model, all the role perspective items, except one from relational crafting, loaded into one distinct factor, while all the resource perspective items, except those from decreasing hindering demands, loaded into the second factor. With the five-factor model, all role perspective items are loaded into one factor, with the resource perspective items loaded into four of their respective factors. The items showed no significant cross-loading between factors for the two or five-factor models. These findings provide evidence to the argument that job crafting does not currently exist as one uniform construct, but rather at the very least, two distinct non-interchangeable constructs.

The divergence and incongruences between the role and resource perspectives bring significant challenges to job crafting theory, research, and application. As most empirical job crafting studies focus on either the resource or, to a lesser extent, the role perspective, findings from role perspective-based studies may not pertain to job crafting from a resource perspective and vice versa (Zhang & Parker, 2019). This challenge presents an impetus for researchers navigating the theory of job crafting and practitioners applying job crafting to the workplace to explore innovative solutions toward a more unified job crafting theory.

While there are many differences between the role and resource perspectives, both perspectives agree that job crafting behaviors comprise those that expand and reduce/reinforce boundaries (Tims et al., 2012; Wrzesniewski & Dutton, 2001). This differentiation between job crafting behaviors is often explained through two related
theories: approach/avoidant motivation and promotion/prevention focus. Approach motivation is characterized by the energization of behavior towards positive stimuli, while avoidance motivation is the energization of behavior away from negative stimuli (Elliot, 2006). Regulatory focus theory builds upon approach/avoidant motivation theory by further delineating between behaviors to approach a desired end state and behaviors that avoid a mismatch with a desired end state (Crowe & Higgins, 1997). A promotion focus is an inclination towards “advancement, growth, and accomplishment, whereas a prevention focus is concerned with security, safety, and responsibility” (Crowe & Higgins, 1997, p. 117). In job crafting, promotion-focused crafting encompasses behaviors that expand aspects of a job toward positive outcomes. In contrast, prevention-focused job crafting encompasses behaviors that prevent adverse outcomes, such as focusing on the most critical aspects of one’s job (Bindl et al., 2019).

Subsequently, several job crafting studies have explored the role or resource perspective from a promotion- and prevention standpoint. Weseler and Niessen (2016) expanded their role-based job crafting scale by differentiating between extension and reduction behaviors in the task and relational crafting dimensions. This approach resulted in a five-factor model: *task crafting – extending, task crafting – reducing, relational crafting – extending, relational crafting – reducing*, and *cognitive crafting*. From the resource perspective, Lichtenthaler and Fischbach (2016) explored promotion and prevention-focused job crafting by dividing Tims et al.’s (2012) JCS into a two-factor model, with the promotion-focused factor comprising items from the *increasing structural job resources, increasing social job resources, and increasing challenging job demands* subscales. The prevention-focused factor consists of items from the *decreasing hindering job demands* subscale.
Differentiating between promotion- and prevention-based behaviors has emerged as one of the most promising strategies for integrating job crafting perspectives. Bruning and Campion (2018) used a qualitative approach to create a new seven-factor scale that integrates job crafting across four quadrants representing the role-resource and approach-avoidant perspectives. While this approach has been commended as one of the first attempts to encompass both role and resource job crafting perspectives, it has been criticized for not genuinely integrating the divergent lines of job crafting perspectives but instead introducing more complexity by reclassifying them in four quadrants (Lazazzara et al., 2020; Zhang & Parker, 2019). Zhang and Parker (2019) theorized a unified hierarchical model of job crafting consisting of four dimensions by differentiating approach and avoidance crafting with behavioral and cognitive crafting: approach crafting (behavioral), approach crafting (cognitive), avoidance crafting (behavioral), and avoidance crafting (cognitive). Job crafting is further divided into resource and demands crafting within these dimensions, culminating in eight sub-dimensions. The arguments for separating behavioral and cognitive crafting stem from the omission of cognitive crafting in the role perspective, along with preliminary research indicating that these two types of crafting may have different antecedents/outcomes and are only moderately correlated (Niessen et al., 2016). However, this model has not yet been empirically tested, as the avoidance crafting (cognitive) dimension, along with the approach crafting (cognitive) towards demands and avoidance crafting (behavioral) towards resources sub-dimensions, have not yet been operationalized (Zhang & Parker, 2019). More recently, Ebert and Bipp (2021) found a model integrating role and resource perspectives with approach and avoidant superordinate factors to have the best fit, providing further empirical evidence supporting the differentiation of job crafting behaviors among these two dimensions.
Bindl and colleagues (2019) integrated the disparate lines of job crafting research into one measure by incorporating the objective differentiation between promotion- and prevention-focused dimensions in the resource perspective with the broader range of job crafting behaviors (e.g., cognitive crafting) initially theorized in the role perspective. Their 28-item Job Crafting Questionnaire (JCQ) encompasses eight dimensions representing promotion- and prevention-focused relationship, skill, task, and cognitive crafting.

Job Crafting and Work Engagement

Originally termed personal engagement, Kahn (1990) describes engagement at work as employing and expressing oneself “physically, cognitively, and emotionally during role performances” (p. 684). From Kahn’s perspective, work engagement is driven by integrating one’s self-identity into the work role. Expanding research on burnout, Schaufeli et al. (2002) separately defined work engagement as “a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption” (p. 74). Schaufeli and colleagues were the first to operationalize the construct, thus making their perspective of work engagement more prevalent in job crafting research.

Promotion-focused job crafting from the resource perspective is well-studied and associated with increased work engagement amongst individuals, dyads, and teams. In their three-wave study on chemical workers, Tims, Bakker, and Derks (2013) found promotion-focused job crafting to increase job resources over time, which mediated the relationship between job crafting and worker well-being (increased work engagement, increased job satisfaction, and decreased burnout). However, there was no relationship between the prevention-focused reducing hindering demands job crafting dimension and well-being. A set of quasi-experimental studies by Gordon et al. (2018) on medical specialists and nurses found the experimental groups who took part in job crafting interventions to have significantly higher work...
engagement than the control groups. The reduction in job demands was related to decreased work engagement for medical specialists. The authors note that this finding was not due to the intervention but rather the culture in the medical field, which has strict constraints on avoiding or shifting responsibilities onto others.

On the dyadic level, Bakker and colleagues' (2015) behavior modeling study found promotion-focused crafting *increasing challenging job demands* and *increasing structural resources* to be positively associated with actor and partner work engagement. Actor *reducing hindering job demands* was negatively related to partner work engagement. Similar findings were reported on the team level, except no relationship was found between team crafting *reducing hindering job demands* and team work engagement (Tims et al., 2013). Lichtenthaler and Fischbach's (2019) cross-sectional and longitudinal meta-analysis SEM models on 132 studies encompassing role and resource job crafting perspectives show promotion-focused job crafting to be positively associated with work engagement and prevention-focused job crafting negatively related with work engagement.

From a resource perspective, expansion-oriented job crafting introduces challenges that stimulate the individual, whereas reduction-oriented job crafting eliminates challenges, leading to boredom and withdrawal (Petrou et al., 2012). Furthermore, from both job crafting perspectives, promotion-oriented crafting behaviors are often successful at expanding boundaries, leading to increased positive affect and work engagement. In contrast, prevention-oriented crafting behaviors often do not reduce boundaries, prompting increased negative affect and decreased work engagement (Lichtenthaler & Fischbach, 2019). Another explanation, as highlighted in Mäkikangas' (2018) study on active and passive job crafters, is that prevention-focused job crafting behaviors may not cause lower work engagement but that individuals who
only engage in prevention-focused behaviors already have a lower baseline of work engagement than those who use both promotion- and prevention-focused behaviors. One challenge to this explanation is the evidence from Vogt and colleagues' (2016) time-lagged longitudinal SEM study, which did not detect reverse causation effects between work engagement and promotion-focused job crafting. In the following section, I present a comprehensive review of prominent studies on job crafting and associated work outcomes that undergird the formation of this dissertation.

Chapter 2: Literature Review

Literature Search Strategy

The literature search was primarily conducted through Google Scholar, as it offers the option to sort studies based on citations in other academic papers. Search terms are identified to capture the majority of empirical job crafting studies and their associated outcomes. The terms utilized in the search include “job crafting,” “intervention,” “outcomes,” and “consequences.” Supplementary to Google Scholar, the search terms were also entered into the PsycInfo database and cross-checked against the Google Scholar results to ensure that prominent studies are not overlooked.

Selection Criteria

I use several criteria to determine the appropriateness for inclusion in the literature review. First, the papers must be empirical in nature, thus precluding purely theoretical or review papers. Second, the studies must be grounded in commonly accepted definitions of job crafting in organizational literature. Papers utilizing job crafting as defined in other fields of study were excluded in the final review process. Third, the studies must include job crafting as a predictor for their outcome variables. Fourth, only studies that investigate job crafting outcomes, and not
just the antecedents, were included in the review. Finally, only studies cited at least ten times by other peer-reviewed articles were included.

**Sample**

Based on the aforementioned inclusion criteria, 49 independent studies were utilized for systematic review out of 54 studies identified from the literature search. Fifty-two independent samples were identified from these studies. Thirty-nine studies included only individuals, resulting in n=16,145 individual participants. Four studies utilized dyadic sampling, resulting in n=432 dyads. Three studies utilized teams in their research, resulting in n=135 teams. The systemic review also included two meta-analyses, accounting for 136 studies.

**Results**

**Work Engagement and Burnout**

The majority of the studies on work engagement and burnout are grounded in Tims and colleagues’ (2012) job crafting theory, as the original conceptualization of job crafting by Wrzesniewski and Dutton (2001) has not been widely operationalized (Oprea et al., 2019). JDR-based job crafting, in general, was related to increased work engagement (Bakker et al., 2012, Gordon et al., 2018, Karatepe & Eslamlou, 2017, Oprea et al., 2019, Rudolph et al., 2017, Tims et al., 2015, Tims et al., 2013, van Wingerden et al., 2017, Vogt et al., 2016). More specifically, increasing structural and social resources were associated with increased work engagement (Bakker et al., 2015, De Beer et al., 2016, Mäkikangas, 2018, Petrou et al., 2017, Petrou et al., 2018). Increasing challenging job demands was also linked to increased work engagement (De Beer et al., 2016). This increase in work engagement from increasing challenging job demands was also associated with a decrease in burnout (Nielsen & Abildgaard, 2012).
Some reviewed studies investigated the casual relationship between job crafting interventions and work engagement. Van Windgerden, Bakker, and colleagues (2017b) found that implementing a job crafting intervention amongst teachers (n=71) increased work engagement over time in the experimental group compared to the control group. A three-wave longitudinal study by Vogt and colleagues (2016) on 940 employees found job crafting to predict increased psychological capital and work engagement over time. These findings are supported by two studies with 119 medical specialists and 58 nurses, in which Gordon et al. (2018) found job crafting interventions to prompt higher levels of work engagement among the experimental groups compared to the control groups.

However, an experiment by van Wingerden, Derks, and colleagues (2017), which investigated the causal effect of personal resources (psychological capital) interventions and job crafting interventions on work engagement, found only personal resources interventions to predict work engagement, with job crafting having no effect on the outcome. Kuijpers et al. (2020) conducted a quasi-experimental job crafting intervention which also resulted in mixed findings. The authors found job crafting towards strengths to be positively associated with all aspects of work engagement (dedication, vigor, and absorption). However, job crafting towards interests was only positively related to dedication and vigor, while job crafting towards development was not associated with any aspect of work engagement. Paradoxically, reducing hindering job demands was found in some studies to be negatively correlated with work engagement (Bakker & Oerlemans, 2019, Demerouti et al., 2015, Kooij et al., 2017, Mäkikangas, 2018). Mäkikangas and colleagues (2018) found this phenomenon to result from the differences between active and passive job crafters. Active job crafters tend to use all four job crafting strategies, including decreasing hindering job demands, while passive job crafters only avoided
hindering job demands. They theorized that passive job crafters could be the cause of the link between reducing hindering job demands and lower levels of work engagement. This phenomenon was also examined in terms of burnout. Lichtenthaler and Fischbach (2016) studied 229 older employees and found promotion-focused (active) job crafting to increase the participants’ sense of coherence (i.e., comprehensibility, manageability, and meaningfulness), which was negatively associated with burnout. In contrast, prevention-focused (passive) job crafting decreased the participants’ sense of coherence, which was positively related to burnout.

It is important to note the bi-directional relationship that exists between job crafting and work engagement. For example, in a Structural Equation Modeling (SEM) analysis, Lu and colleagues (2014) found work engagement to predict both physical (task) and relational job crafting. Furthermore, a three-wave longitudinal study by Tims et al. (2015) found a cyclical effect in which job crafting intentions and work engagement predicted job crafting, which, in turn, predicted even higher levels of work engagement.

Work Performance

Due to the link between work engagement and work performance (Bakker & Leiter, 2010; Christian et al., 2011), it is not surprising that many of the studies reviewed found a robust positive relationship between job crafting and work performance (Bakker et al., 2012; Dierdorff & Jensen, 2018; Gordon et al., 2018; Tims et al., 2012; Tims et al., 2013b; Rudolph et al., 2017). In a meta-analysis of 14 studies, Oprea and colleagues (2019) identified an indirect effect of work engagement on the relationship between job crafting and work performance.

Many of the studies reviewed examined the varying impact each component of job crafting had on work performance. Gordon and colleagues (2015) identified a significant positive relationship between the seeking resources component of job crafting and task/creative
performance amongst Dutch and American health care professionals. Similarly, Bruning and Campion (2018) found a significant positive relationship between seeking resources and job performance when conducting 246 interviews with employees and supervisors. Petrou et al. (2015), in their study with 580 police officers, also found a significant positive relationship between seeking resources and high task performance.

Analogous to the findings pertaining to work engagement, Kooij et al. (2017) found that participants in their study who decreased their hindering job demands also reported decreased job performance in their longitudinal study. In comparison, Petrou and colleagues (2015) determined that increasing challenging job demands was significantly and positively related to other-rated work performance. When examining job crafting through the lens of Wrzesniewski and Dutton's (2001) operationalization of job crafting, Weseler and Niessen (2016) observed the same phenomenon in which extending task boundaries (increasing challenging job demands) had a positive relationship with self- and supervisor-rated task performance, while reducing relational and task boundaries (decreasing hindering job demands) had a negative relationship with self-rated task performance. Interestingly, they did not find a significant relationship between decreasing task boundaries and supervisor-rated task performance. When investigating job crafting from a promotion- vs. prevention-oriented perspective, Bindl et al. (2019) discovered that promotion-oriented task crafting, relationship crafting, skill crafting, and cognitive crafting all had significant positive relationships with innovative work performance, while none of the prevention-oriented components of skill crafting had significant relationships with innovative work performance other than cognitive reframing. Overall, the findings in this review of literature on the relationship between job crafting and work performance are consistent with the findings from Rudolph and colleagues' (2017) meta-analysis of 122 independent studies. The
authors found all of the components of job crafting to be positively related to both self- and other-rated performance, except for decreasing hindering job demands, which was negatively related to performance.

A noteworthy phenomenon between the relationship between job crafting and work performance was investigated by Dierdorff and Jensen (2018). The authors were the first to empirically examine the theory of a U-shaped relationship between the two constructs. Their study found that this U-shaped relationship exists for participants in jobs that allowed only a low level of autonomy. They surmised that this phenomenon occurs because low levels of job crafting will not change the employees’ behavior enough to create dysfunction within the organization. Dierdorff and Jenson found that participants who engage in high levels of job crafting often receive enough feedback on their job crafting activities to ensure that they are positively benefiting their performance. In contrast, employees with low autonomy who only engage in moderate levels of job crafting exhibited lower levels of work performance due to deviating too far from their role responsibilities while not receiving enough feedback.

**Job Satisfaction**

Seven of the studies reviewed investigated the relationship between job crafting and job satisfaction. In the validation of the Job Crafting Questionnaire (JCQ), based on Wrzesniewski and Dutton’s (2001) theorization of job crafting, Slemp and Vella-brodrick (2013) found all three facets of job crafting (Task, Relational, Cognitive) and job crafting in general, to be significantly and positively correlated to job satisfaction. Kim and colleagues' (2018) SEM study on 327 South Korean hotel employees utilized the JCQ and found a pathway in which perceived organizational support influenced task crafting, which influenced cognitive and relation crafting, leading to higher levels of person-organizational fit, concluding with higher levels of job
satisfaction. Similar findings were reported by Ingusci et al. (2016), in that perceived organizational support mediated the relationship between job crafting and job satisfaction. Interestingly, when comparing individual and collaborative job crafting behaviors as theorized by Wrzesniewski and Dutton (2001) amongst 232 teachers and aides, Leana et al. (2009) found individual job crafting behaviors to be negatively related to job satisfaction, while collaborative job crafting behaviors were positively related to job satisfaction.

When viewing job crafting through the lens of the JDR model, connections were also found between some of the components of job crafting and job satisfaction. In Nielsen and Abildgaard's (2012) validation of a JDR-based job crafting measure for blue-collar workers, the results showed a significant and positive relationship between increasing challenging demands and increasing social job resources with job satisfaction. Similarly, de Beer and colleagues' (2016) examination of job crafting amongst employees in the mining and manufacturing sector found increasing social job resources and challenging job demands to be associated with increased job satisfaction. Decreasing hindering job demands was also related to high job satisfaction. Conversely, Bruning and Campion (2018) reported increasing social job resources to be the only component in job crafting significantly and positively related to job satisfaction.

Organizational Commitment and Turnover

Four of the studies reviewed examined the relationships between the various aspects of job crafting and organizational commitment and turnover. In a longitudinal study involving 121 Iranian flight attendants and pursers, Karatepe and Eslamlou (2017) found that those who were more engaged in job crafting activities at Time 1, reported higher levels of work engagement at Time 2, and lower quitting intentions at Time 3. Leana and colleagues' (2009) study comparing individual and collaborative job crafting found a significant positive relationship between
collaborative job crafting and organizational commitment. The authors report that each increase of one standard deviation in collaborative job crafting was associated with a 21% increase in organizational commitment. However, no significant relationships existed between either individual or collaborative job crafting and turnover intentions.

Similarly, Rudolph and colleagues' (2017) meta-analysis did not find a significant relationship between job crafting and turnover intentions. Though non-significant, the meta-analysis found increasing structural and challenging job demands to be negatively related to turnover, while decreasing hindering job demands was positively related to turnover. In their study on job crafting and employees’ motivation to continue working beyond their retirement age, Lichtenthaler and Fischbach (2016) did not find a significant direct effect between job crafting and motivation to continue working. However, using bootstrap analyses, the authors reported promotion-focused job crafting having an indirect effect on a greater motivation to continue working after retirement age; through the pathway of promoting a greater work sense of coherence and less burnout.

**Fit**

Five studies examined fit between a person and the organization, job, needs, or abilities as an outcome associated with job crafting. In Bakker's (2018) study with health care professionals, it was discovered that job crafting in the form of increasing resources was strongly and positively related to person-organization fit when the participants' work engagement was high. Kim and colleagues (2018) also found relational and cognitive crafting to predict person-organization fit in their structural model significantly. However, while predictive of relational and cognitive crafting behaviors, task crafting was not directly predictive of person-organizational fit.
When examining job crafting interventions towards strengths and interests, Kooij, van Woerkom, et al. (2017) reported the surprising finding that while they detected an indirect positive effect of their job crafting intervention on person-job fit amongst older workers when job crafting towards strengths, there was a negative effect on person-job fit amongst younger workers. The authors surmise that the cause of this finding is due to younger workers utilizing skill development rather than job crafting to address deficiencies in person-job fit. The study also did not detect any effects on job crafting towards interests on person-job fit. On the other hand, Tims et al. (2016), through a longitudinal study, found that participants who engaged in job crafting behaviors (increasing job resources and challenging job demands, decreasing hindering job demands) reported higher levels of person job-fit (both demands-ability and needs-supplies fit) one week after engaging in the behaviors. When examining the moderating role of job crafting in the relationship between work engagement and person-job fit, Lu and colleagues (2014) found physical job crafting (expanding autonomy, task identity, and job variety boundaries) to mediate the positive relationship between work engagement and demands-abilities fit, while relational job crafting mediated the positive relationship between work engagement and needs-supplies fit.

Discussion

From this review of literature, the most studied and prevalent outcomes for job crafting behaviors were work engagement, performance, and satisfaction, as well as organizational commitment and fit. While job crafting, in general, was reported to be highly related to these outcomes, this relationship becomes more complex when examining each component of job crafting. There were inconsistencies between the relationships of the components and the outcomes mentioned above, with some studies finding strong, positive relationships while others
found negative or null relationships. In particular, the decreasing hindering job demands dimension in Tims et al.'s (2012) JCS was negatively related to most of the hypothesized outcomes of job crafting. These findings underscore that while job crafting is a valuable tool in achieving positive outcomes for the individual, there are also instances where it may be detrimental.

Furthermore, findings from this review highlight the importance of contextual effects on job crafting behaviors and interventions. For example, Dierdorff and Jensen (2018) discovered that job crafting behaviors undertaken in a low-autonomy environment resulted in adverse outcomes for the job crafter and increased dysfunction throughout the organization. Therefore, job crafting interventions must be well adapted to the specific context in which they will be applied. These findings support the arguments brought forth by Nielsen and Miraglia (2017), who emphasize the importance of understanding the context and process mechanisms when evaluating the potential effectiveness of an intervention for a particular use case. While the JCS comes closest to providing a “one size fits all” approach to job crafting, this review of literature further accentuates the importance of work context-specific job crafting studies.

While this literature review is focused on job crafting behaviors and outcomes, the findings provide insight into how the pandemic and WFH context may impact job crafting processes and antecedents. For example, work sense of coherence is a mediator between job crafting and burnout in Lichtenthaler and Fischbach's (2016) study on promotion- vs. prevention-focused job crafting. The shift to a WFH modality may drastically alter a job's comprehensibility, manageability, and meaningfulness, all of which contribute to one’s work sense of coherence. Therefore, in the case where the WFH environment decreases the manageability and meaningfulness of a job due to work-home interference and loneliness in a
virtual environment (Wang et al., 2021), job crafting interventions will need to evolve their exercises to target challenges to a person’s work sense of coherence that were not as prevalent in an office environment.

Changing perspectives about the future due to the pandemic may also affect the propensity of job crafting behaviors and its outcomes. Future Time Perspective (FTP) was identified by Kooij and colleagues (2017) as an antecedent to job crafting and is a set of acquired beliefs and expectations about the future (Husman & Shell, 2008). Individuals who have an open-ended FTP believe they have a long future and are focused on long-term goals and exploring new opportunities, contrasted with those that have a limited FTP, who see constraints and limited possibilities in their future, and are subsequently focused on short-term goals and meaningful experiences in the present (Kooij et al., 2017). While FTP is understood as a set of relatively stable beliefs, short-term distortions can occur due to changing environmental factors (Husman & Shell, 2008). The pandemic and subsequent shift to a WFH context may cause workers who had a previously open-ended FTP to temporarily take on a limited FTP due to uncertainty about their future. Kooij and colleagues’ (2017) SEM study found individuals with open-ended FTP to be more likely to engage in behaviors to increase their challenging job demands and resources, resulting in higher work engagement and job performance. Conversely, those with limited FTP tend to only job craft towards decreasing hindering job demands and experienced lower work engagement and job performance. Therefore, future job crafting interventions may need to take extra precautions in ensuring that participants engage in productive aspects of job crafting and avoid focusing solely on decreasing their hindering job demands.
Another interesting phenomenon observed in this review is the presence of divergent research streams due to foundational differences between Wrzesniewski and Dutton's (2001) and Tims et al.'s (2012) conceptualizations of job crafting. While both conceptualizations of job crafting are mentioned in the reviewed articles, each study only focuses on either meaning and identity or JDR based job crafting. Therefore, job crafting theory has predominantly branched out into two distinct pathways. While job crafting interventions may target the same outcomes, these findings highlight the importance of investigating which theories undergird the behaviors and the associated mechanisms in reaching the desired outcomes when evaluating the effectiveness of job crafting.

Conclusion

This review of literature identifies and synthesizes findings on the relationship between job crafting and its most prevalent work outcomes. The results show a strong association between job crafting and various positive personal and organizational outcomes. However, it is also apparent from this review that context plays a significant role in determining the successfulness of job crafting behaviors and interventions.

The two most prominent job crafting theories and all the studies reviewed above were developed in a world where most jobs were assumed to be in-person. With the shifting work modalities brought forth by the COVID-19 pandemic, it is essential for job crafting researchers to examine the phenomenon from a remote work or WFH context. Challenges faced by remote workers, such as ineffective communication, work-home interference, and loneliness may very well emerge as predictors, moderators, or mediators in the relationship between job crafting and many of its outcomes. The findings from this review also highlight the importance of research into the potential impact this new work context will have on the antecedents and process
mechanisms of job crafting to ensure that interventions remain relevant and avoid unintended negative outcomes, such as increased procrastination and decreased work engagement.

Another avenue for future research is comparison and integration of role and resource-based job crafting behaviors and interventions. Most of the studies reviewed utilize job crafting scales developed from Wrzesniewski and Dutton's or Tims et al.'s job crafting theories, but both scales are very rarely employed together in a study. Due to the effects context has on job crafting effectiveness, it is difficult to directly compare the two prominent job crafting theories when even similar studies recruit participants from different populations and work environments. Future studies incorporating aspects from multiple job crafting perspectives will provide valuable insight into which theory or combination of theories are most effective in a specific work context.

Chapter 3: Theoretical Model Development and Hypotheses

I investigated the relationship between remote work, job crafting, and work engagement primarily through the perspective of gain cycles and loss spirals. Researchers have used this framing to explain the relationship between promotion- and prevention-focused job crafting and work engagement from both role and resource viewpoints (Lichtenthaler & Fischbach, 2019). Gain cycles refer to a phenomenon in which work resources offset work demands, leading to increased motivation (such as work engagement, commitment, and flourishing) and decreased strain (including exhaustion, job-related anxiety, and health issues). This heightened state of motivation stimulates expansion-oriented behaviors, such as promotion-focused job crafting (Bakker & Demerouti, 2017; Halbesleben et al., 2014). These expansion-oriented behaviors create more work resources and further enhance motivation, continuing the cycle. On the other hand, in loss spirals, low work resources are overwhelmed by work demands, resulting
in intensified strain and diminished motivation, prompting role-reduction behaviors (i.e., prevention-focused job crafting) that are often unsuccessful due to the difficulty of avoiding work responsibilities, and leading to loss of invested resources and increased demands. These negative consequences further induce strain and diminish motivation, prompting even more reduction-oriented behaviors, thus continuing the spiral of loss.

As job crafting is a bottom-up approach to work design (Tims et al., 2012; Wrzesniewski & Dutton, 2001), prior research in this domain predominately focuses on the mediating effect of work resources and demands on the relationship between job crafting and work outcomes. (Bakker & Demerouti, 2017; Tims, Bakker, & Derks, 2013; van den Heuvel et al., 2015; van Wingerden, Bakker, et al., 2017b). However, studies investigating job crafting in the remote work context predominantly concentrate on the mediating effect of job crafting on the linkages between remote work advantages, disadvantages, and work outcomes (Costantini & Rubini, 2021; Ingusci et al., 2021; Saragih et al., 2021; Stempel & Siestrup, 2022). This strategy highlights the job characteristics unique to remote work arrangements and provides valuable insights on how supervisors and organizations can help employees induce gain cycles and break out of loss spirals through job crafting behaviors. Following the established research trend, I identified remote work advantages and challenges as remote work resources and demands and explored their influence on work engagement through job crafting. I established a theoretical model (Figure 1) in which job crafting mediates the relationship between remote work resources, demands, and work engagement. This section provides an overview of the model components and rationale for the hypotheses.
Remote Work Resources

Work resources generally refer to organizational, psychological, physical, or social job characteristics that contribute towards attaining work goals, reducing work demands, and promoting employee learning, growth, and development (Bakker & Demerouti, 2007). As such, work resources cover an immense breath of attributes ranging from contextual, such as the degree of autonomy in a job, to personal, such as one’s level of self-efficacy (ten Brummelhuis & Bakker, 2012). While acknowledging that personal resources are equally important, I concentrated on contextual work resources in this model due to this study’s focus on remote working arrangements.

**Autonomy.** Hackman and Oldham (1976) initially conceptualized autonomy as one of the main contributors to work motivation. Since then, researchers have expanded the concept of autonomy to reflect the degree of control a person has over scheduling work, making decisions, and choosing methods to undertake tasks in a job (Morgeson & Humphrey, 2006). As an effect
of working outside of the office, many hybrid or fully remote workers report experiencing
greater job autonomy, especially regarding work scheduling and making decisions (Ingusci et al.,
2022; Tremblay & Thomsin, 2012). Qualitative and quantitative studies on employees working
from home during the COVID-19 pandemic identified job autonomy as one of the most defining
remote work characteristics (Wang et al., 2021) and is related to positive work outcomes such as
work engagement (Galanti et al., 2021). As hypothesized in Wrzesniewski and Dutton's (2001)
seminal paper on job crafting, greater control over one’s tasks and time is a pivotal contributor to
the emergence of crafting behavior. In line with the theory of gain cycles, job autonomy
promotes proactive behaviors, such as job crafting, by signaling supervisor support for and
providing opportunities to engage in such behaviors (Grant & Ashford, 2008). The resultant
increase in experienced efficacy further reinforces this cycle of proactivity.

**Social Support.** Widely studied as one of the core work resources (Bakker & Demerouti,
2007; Halbesleben et al., 2014; ten Brummelhuis & Bakker, 2012), social support is vital for
remote workers due to increased feelings of social isolation from managers and coworkers
(Galanti et al., 2021; Kniffin et al., 2021; Wang et al., 2021). Social support reflects the extent to
which a job offers opportunities to build friendships and receive advice and assistance from
others at work (Morgeson & Humphrey, 2006). Wang and colleagues (2021) found social
support “to be the most powerful virtual work characteristic because it had positive indirect
impacts on performance and well-being via its associated beneficial effects on all the identified
[remote work] challenges” (p. 31). While the study did not explicitly study work engagement,
the authors found that social support negatively impacts emotional exhaustion through decreased
procrastination among remote workers. Social support also decreases psychological strain and
increases job satisfaction by reducing feelings of social isolation (Bentley et al., 2016). As such,
social support is an excellent example of a work resource that motivates through both the intrinsic pathway of satisfying the basic need of relatedness and the extrinsic pathway of helping workers accomplish their goals by keeping each other accountable.

**Organizational Support.** Organizational support refers to the degree an organization values employees’ contributions and prioritizes their well-being (Neves & Eisenberger, 2014). Organizations provide support by rewarding contributions and providing resources such as developmental training and job enrichment opportunities. Desrosiers (2001) found remote workers to report higher levels of perceived organizational support than those in traditional working arrangements. This finding is explained to be due to the preponderance of trust needed for organizations to allow remote work arrangements. Potentially an unexpected consequence of increased trust, one challenge disproportionally experienced by remote workers compared to their in-person counterparts is the fear of decreased visibility in the organization (Gajendran & Harrison, 2007; Inguscì et al., 2022; Tremblay & Thomsin, 2012). Although most remote workers are measured using the same objective performance measures as their colleagues in traditional work arrangements, there is the worry that extra efforts at work, such as organizational citizenship behaviors (OCBs), might go unnoticed in the eyes of management, thereby leading to decreased career opportunities (Richardson & Kellihier, 2015). Additionally, remote workers often feel left out of in-person training and development opportunities easily accessible by those in the office (Golden et al., 2008). Thus, organizational support remains a crucial remote work resource to offset these feelings of being “invisible” (Makarius & Larson, 2017).

**Feedback.** Feedback, defined as clear and direct information regarding the effectiveness of one’s work (Hackman & Oldham, 1976), is a core resource component in the JDR model
Aside from improving job performance, constructive feedback provides a better picture of the subjective results of one’s work, which promotes motivation and work engagement (Hackman & Oldham, 1976). In a study conducted with remote workers, feedback is the second most fundamental work resource, after autonomy, to predict engagement (Sardeshmukh et al., 2012). However, in the same study, those who participated in a greater extent of remote work also reported receiving less feedback. The authors contend this finding to be due to the greater degree of separation from colleagues in remote work and the lack of richness in communication inherent in ICTs. In remote work, most interactions between individuals are formal and planned. The reduction in random “watercooler” conversations experienced by remote workers also means less opportunity to receive informal feedback from supervisors and coworkers compared to those operating in traditional work contexts (Allen et al., 2015). Feedback is equally impactful from a job crafting perspective, as soliciting and receiving feedback on one’s efforts toward bottom-up job redesign is essential to avoid dysfunctional crafting outcomes (Dierdorff & Jensen, 2018).

Remote Work Demands

Work demands comprise aspects of a job that require sustained physical and psychological effort and energy (Bakker & Demerouti, 2007). While work resources stimulate motivation, job demands induce strain through a compensatory regulatory-control process. When demands increase, workers are compelled to invest extra energy to maintain performance levels. Work demands are often differentiated into two categories: challenging demands that promote personal growth and achievement and hindering demands that employees perceive negatively and interfere with goal attainment (Bakker & Demerouti, 2017). However, as challenge demands can also be perceived as hindering demands depending on context (Bakker & Sanz-Vergel,
demands are often studied as a singular construct (Bakker & Demerouti, 2017). While work demands are not inherently detrimental, prolonged exposure to high demands, coupled with low resources, often results in burnout and ill health over time (Schaufeli et al., 2009). The theoretical model focused on job demands related to remote work arrangements.

*Work-life Conflict.* Also known as work-life interference or work-home interference, work-life conflict refers to “difficulty participating in nonwork domains by virtue of participation in the work domain” (Keeney et al., 2013, p. 222). With the rise of remote work arrangements, work and personal lives are intertwined, often with no clear beginning or end to the work day (Beňo, 2021; Grant et al., 2019; Ingusci et al., 2022). Remote workers, especially those who work at home (Morganson et al., 2010), tend to experience better work-life balance than in-person workers due to more flexibility in scheduling and not having to commute to work (Beňo, 2021; Golden et al., 2006). However, work-life conflict continues to be an issue faced by remote workers, as too much autonomy can also promote counterproductive work behaviors (Zhou, 2020), such as procrastination, resulting in higher workload and stress, which interfere with personal lives (Molino et al., 2020; Wang et al., 2021). Furthermore, work and personal lives become increasingly intertwined in remote work arrangements, often with no clear beginning or end to the work days (Ingusci et al., 2022; Tarafdar et al., 2007; Wang et al., 2021). The blurring of work and personal roles often results in increased work-life conflicts, especially when there are low work resources (Delanoeije & Verbruggen, 2020; Glavin & Schieman, 2012). The ubiquitous presence of ICTs also contributes to work-life conflict, with remote workers often feeling obligated to respond to emails and tasks outside of work hours (Leonardi et al., 2010; Molino et al., 2020).
**Professional Isolation.** Isolation and loneliness are some of the challenges most often identified in remote work due to increased distance between workers (Beňo, 2021; Tremblay & Thomsin, 2012; Wang et al., 2021). Professional isolation encompasses these feelings in the work context and describes “a state of mind or belief that one is out of touch with others in the workplace” (Golden et al., 2008, p. 1412). Professionally isolated remote workers tend to be less confident in their knowledge and abilities, resulting in poorer performance. Consequently, remote workers suffering from professional isolation often end up needing to take more corrective actions, increasing stress and anxiety.

Furthermore, from a team-level perspective, remote workers frequently encounter difficulties building affective bonds with their teammates compared to their in-person counterparts (Mann et al., 2000). As described by a remote worker: “I miss the contact with my colleagues, sort of my friends at work, you sometimes feel a bit isolated. You can’t chat things over and just sort things out. I miss the camaraderie you get within an office” (p. 679). Coinciding with reduced camaraderie, the same study found remote workers to be less likely to experience emotional contagion in the sense of shared excitement or enthusiasm that can pervade an office with the introduction of new projects. On the other side of the coin, remote workers also gain increased immunity to the contagion of negative emotions circulating the office.

**Techno-overload.** Techno-overload refers to increased work demands due to technology (Ragu-Nathan et al., 2008). “Parallel to the introduction of ICTs, there is almost always the effort to create a leaner organization. People are simply expected to work faster and do more in less time” (Tarafdar et al., 2007, p. 308). In addition to heightened expectations of work output, technical difficulties encountered with experimentation, implementation, and daily utilization of the constantly changing technologies that enable remote work collaboration can bring
unexpected work demands and stress (Ingusci et al., 2021). Remote workers frequently
encounter problems such as connection issues, difficulties sharing presentations on
teleconferencing software (i.e., Zoom and Teams), or loss of work due to version conflicts on
cloud file-sharing services (i.e., Dropbox and OneDrive); experiences undoubtedly shared by
many during and following the pandemic.

Role Ambiguity. Role ambiguity involves uncertainties related to expectations in
performing tasks or meeting responsibilities associated with one’s role (Rizzo et al., 1970).
Ineffective communication (Tarafdar et al., 2007; Wang et al., 2021) and diminished feedback
(Sardeshmukh et al., 2012) are significant challenges faced by remote workers, and both
contribute to increased role ambiguity (Bowling et al., 2017). Sardeshmukh and colleagues’
(2012) JDR-based study found that while a greater extent of remote work negated job demands
such as time pressure and role conflict, it was also associated with higher role ambiguity.
Managers in remote work arrangements commonly evaluate their subordinates’ performance
based on work outputs, products, and deliverables, instead of the behaviors and processes
involved in generating output to adapt to the increased distance inherent in the work context
(Gajendran & Harrison, 2007). Apropos, even if adequate feedback is received to ensure goal
clarity, there may be insufficient insights included in the feedback for remote workers to gain
process clarity.

Remote Work Resources, Demands, and Engagement

Work resources impact engagement through dual pathways of intrinsic and extrinsic
motivation (Bakker & Demerouti, 2007). Intrinsically, work resources promote higher
engagement through increased opportunities to satisfy the basic human needs of autonomy,
competence, and relatedness. Extrinsically, work resources motivate higher engagement by
increasing the likelihood that work goals will be accomplished. Xanthopoulou and colleagues' (2009) daily diary study on employees in a traditional work context suggested a pathway in which daily job resources increased daily personal resources such as self-efficacy and optimism, thereby contributing to higher day-level work engagement. In several studies, remote work resources have also been found to be, ceteris paribus, positively associated with work engagement. For example, the remote work resources of autonomy, feedback, and social support were all reported to be positively and significantly associated with work engagement in Sardeshmukh and colleagues' (2012) research on remote workers. A longitudinal study by Masuda et al. (2017) on teleworkers found that perceived supervisor goal support led to increased goal progress, resulting in higher work engagement.

On the other hand, job demands impact work engagement through strain and burnout (Bakker & Demerouti, 2017). As previously stated, while challenging demands can impact engagement through increased motivation, they have the potential to introduce confounds to a model due to participants perceiving challenging demands, such as workload, as hindering demands (Bakker & Demerouti, 2017). As such, it was decided to focus on hindering demands most pertinent to the remote work context in this study. Regardless of the dichotomy, when unchecked by resources, job demands lead to increased stress and burnout over time, which is associated with decreased work engagement (Schaufeli & Bakker, 2004). Hindering demands, such as techno-overload and professional isolation, have been reported to increase stress for remote workers significantly (Golden et al., 2008; Ingusci et al., 2021). Therefore, it is hypothesized (Figure 2) that:

H1: Remote work resources are positively related to work engagement.

H2: Remote work demands are negatively related to work engagement.
Figure 2. *Theoretical model depicting hypothesized relationships between remote work resources, demands, and work engagement.* Green = positive path coefficient, red = negative path coefficient.

**Mediating Role of Promotion and Prevention-focused Job Crafting**

As identified in the literature review, evidence linking job crafting to work engagement is well established in traditional work contexts. Promotion-focused job crafting is consistently reported to be associated with higher work engagement, while prevention-focused job crafting is often found to have a weak negative relationship with work engagement. Lichtenthaler and Fischbach's (2019) meta-analyses on 132 empirical job crafting studies explain the differing outcomes of promotion- and prevention-focused crafting on work engagement to be due to the perceived success of the behaviors. Employees who utilize promotion-focused job crafting behaviors often successfully expand their work boundaries. This positive return on investment of resources results in positive work affect, which leads to greater engagement.

On the other hand, prevention-focused job crafting attempts frequently fail at reducing work boundaries and demands due to difficulties in avoiding work responsibilities, resulting in a net loss of invested resources. This loss of resources leads to negative work affective states (Halbesleben et al., 2014), adversely impacting work engagement. These findings remain valid in the few studies on job crafting in the remote context. Promotion-focused job crafting mediates the relationship between autonomy and well-being (Saragih et al., 2021) and between work
overload and stress among remote workers (Ingusci et al., 2021). Remote workers who engage in higher frequencies of promotion-focused work organization behaviors experience above-average work engagement over time, while those who resort to role reduction behaviors experience below-average work engagement over time (Costantini & Rubini, 2021). Although prevention-focused behaviors were not measured, Stempel and Siestrup (2022) found the promotion-focused job crafting component of increasing structural resources to mediate the relationship between remote work advantages and engagement. Given these findings, I expected the established relationships between job crafting and work engagement to continue in the remote work context.

Employees experiencing an imbalance between their job demands and resources will utilize job crafting strategies to regain balance (Tims et al., 2012). Those with high work resources often engage in promotion-focused job crafting to build more resources and challenging demands (Zhang & Parker, 2019). Mansour and Tremblay (2020) explain this phenomenon in the context of job crafting such that in situations where ample opportunities and resources exist for job crafting, employees “seek to increase resources and challenges as an effective strategy rather than try to decrease hindering demands” (p. 780). Many of the remote work resources in the model are associated with promotion-focused behaviors. Autonomy is described as an antecedent of promotion-focused job crafting behaviors from both role (Leana et al., 2009; Wrzesniewski & Dutton, 2001) and resource (Rudolph et al., 2017) perspectives.

Furthermore, autonomy has a synergistic relationship with promotion-focused job crafting as it encourages expansion-oriented goals (Grant & Ashford, 2008), and engagement in behaviors to reach these goals is associated with stronger feelings of well-being (Slemp et al., 2015). Promotion-focused job crafting mediated the pathway between autonomy and well-being in a study on remote workers during the COVID-19 pandemic, counteracting the adverse effects
experienced by those with too much autonomy (Saragih et al., 2021). Perceived organizational support (POS) has been found to positively influence failure-related trust between supervisors and subordinates, leading to higher incidences of risk-taking behaviors for subordinates (Neves & Eisenberger, 2014). In job crafting, POS should further the emergence of riskier promotion-focused crafting behaviors around increasing challenging job demands, such as developing new skills or taking on more ambitious tasks at work.

Individuals who experience higher levels of social support at work are more open to expanding their relational boundaries (Golden et al., 2008). As co-worker interactions are a crucial source of contextual information in the workplace, social support also provides essential information for individuals to engage in cognitive crafting, gaining a holistic picture of how their work and roles fit in with the organization and society at large (Bindl et al., 2019; Wrzesniewski & Dutton, 2001). Along with work resources like autonomy and social support, Dierdorff and Jensen (2018) stress the importance of feedback in avoiding dysfunctional outcomes associated with job crafting. As such, remote work resources are expected to have a positive relationship with promotion-focused job crafting.

However, the relationship between remote work demands and promotion-focused crafting is more ambiguous. It is theorized that individuals experiencing high demands will engage in promotion-focused job crafting towards acquiring resources to buffer demands (Tims et al., 2012). Indeed, Ingusci and colleagues (2021) reported higher work overload to be positively related to the promotion-focused job crafting behaviors of *increasing structural resources* and *increasing challenging demands*. However, while validating their scale, Tims et al. (2012) found their data to support the JDR model pathway in which high demands and low resources lead to burnout. Burnout, specifically the cynicism component, reduces motivation to engage in
expansion-oriented behaviors (Lichtenthaler & Fischbach, 2019). Aside from reduced motivation, remote work demands may hinder the emergence of promotion-focused job crafting behaviors in other ways. Remote workers suffering from professional isolation experience challenges managing interpersonal relationships and interactions with others to coordinate complex tasks (Golden et al., 2008), which may negatively impact promotion-focused task crafting. Employees with high role ambiguity may find it challenging to constructively expand their task and skill boundaries because they do not understand their role expectations (Dierdorff & Jensen, 2018). Even if role expectations are clear, individuals already experiencing high levels of techno-overload and work-life conflict may find it overwhelming or counterproductive to expand their task and skill boundaries as it often results in more work demands (Tims, Bakker, & Derks, 2013). By synthesizing these findings on the relationships between remote work resources/demands, promotion-focused job crafting, and work engagement, it is hypothesized (Figure 3) that:

H3: Promotion-focused job crafting will mediate the relationship between remote work resources, demands, and work engagement such that: (H3a) remote work resources are positively related to promotion-focused job crafting, (H3b) remote work demands are negatively related to promotion-focused job crafting, and (H3c) promotion-focused job crafting is positively related to work engagement.
Evidence on the mediating effect of prevention-focused job crafting in the relationship between work resources/demands and engagement are mixed. While Lichtenthaler and Fischbach's (2019) meta-analysis found prevention-focused job crafting to be significantly and negatively related to work engagement in both cross-sectional and longitudinal studies, the effect sizes were small. As previously discussed, the primary rationalization behind these findings is that prevention-focused job crafting behaviors mostly fail to reduce demands due to the impossibility of avoiding core job responsibilities without suffering negative consequences. However, as prevention-focused job crafting has not yet been broadly studied in the remote context, it would be remiss to disregard this pathway. Further investigation of prevention-focused job crafting can provide valuable insights for avoiding the associated adverse outcomes or changing the behaviors to be more productive (Bindl et al., 2019; Zhang & Parker, 2019).

One of the principles of COR theory is that individuals must invest resources to gain further resources and protect themselves from resource loss (Halbesleben et al., 2014). While individuals with more resources tend to take higher calculated risks to gain resources (i.e.,
promotion-focused behaviors) through a greater investment of their current resources, those with fewer resources tend to use less costly but often unsuccessful attempts (i.e., prevention-focused behaviors) to conserve their current resources (Hobfoll, 1989). For example, individuals experiencing low social support perceive their coworkers as less friendly (Morgeson & Humphrey, 2006). Thus, they may be more likely to avoid disliked coworkers or be hesitant about meeting new people to protect their already diminished perceptions of social support. Employees experiencing low autonomy engage primarily in prevention-oriented job crafting as they lack the resources and opportunity to expand their job boundaries (Mansour & Tremblay, 2020). Furthermore, remote workers may have a higher propensity to reduce their role boundaries when receiving less feedback due to uncertainty about how higher-risk, expansion-oriented behaviors are received by others (Dierdorff & Jensen, 2018).

On the other hand, higher remote work demands are expected to stimulate prevention-focused job crafting. From the resource perspective, job crafting theory contends that individuals with high demands will engage in behaviors to decrease hindering demands (Tims et al., 2012). While Wrzesniewski and Dutton (2001) do not differentiate between expansion or reduction-oriented behaviors in their seminal job crafting paper from a role perspective, it is posited that the need for control, work meaning, positive self-image, and human connections motivate job crafting behaviors. The remote work demands in the proposed model are all identified as hindering by remote workers and have the propensity to impact motivations for job crafting. For example, role ambiguity hinders the ability of employees to complete tasks through uncertainty about expectations while potentially increasing the need for work meaning due to vagueness about the part their role performs in the organization. Therefore, remote workers experiencing increased role ambiguity may try to simplify their tasks and streamline their skills in an attempt
to reduce their work boundaries to a point where it brings more role clarity. From an approach-avoidant motivation perspective, humans instinctively adopt avoidant behaviors toward uncomfortable stimuli (Higgins, 1998), such as techno-stress, work-life conflict, role ambiguity, and professional isolation. Thereby, it is hypothesized (Figure 4) that:

H4: Prevention-focused job crafting will mediate the relationship between remote work resources, demands, and work engagement such that: (H4a) remote work resources are negatively related to prevention-focused job crafting, (H4b) remote work demands are positively related to prevention-focused job crafting, and (H4c) prevention-focused job crafting is negatively related to work engagement.

![Diagram](image)

Figure 4. Theoretical model depicting hypothesized mediating effects of promotion- and prevention-focused job crafting on remote work resources, demands, and work engagement. Green = positive path coefficient, red = negative path coefficient.

**Moderating Role of Perceived Job Crafting Success**

Both role and resource job crafting perspectives theorize expansion and reduction-oriented crafting behaviors to result in positive outcomes, such as increased work engagement,
for the job crafter (Tims et al., 2012; Wrzesniewski & Dutton, 2001). However, empirical studies predominately find promotion-focused job crafting to be related to increased work engagement while reduction-oriented job crafting is associated with decreased work engagement (Lichtenthaler & Fischbach, 2019). The prevailing explanation for this discrepancy between theory and practice revolves around the success of job crafting behaviors. Employees are often successful in their attempts to expand their work boundaries. Expansion of work boundaries increases resources for the employee, meaning they can take on more demands, thus benefitting both the individual and the organization (Tims, Bakker, & Derks, 2013). Aside from reaping the rewards of boundary expansion, achieving job crafting goals prompts feelings of positive affect, leading to heightened well-being (Lichtenthaler & Fischbach, 2019).

On the contrary, prevention-focused job crafting attempts frequently fail in reducing work boundaries and demands. Reduction of job boundaries and demands usually results in responsibilities and demands being pushed on others in the organization. As such, these behaviors are often discouraged and poorly received by coworkers and supervisors. For example, Gordon et al. (2018) reported that although their job crafting intervention was successful in inducing both expansion- and reduction-oriented behaviors in their sample of healthcare workers, the participants were unsuccessful at reducing their job demands due to the impossibility of avoiding specific role responsibilities in the healthcare environment. Failure at prevention-focused crafting behaviors negates the expected benefits and results in the loss of resources invested towards the crafting attempt. This loss of resources leads to negative work affective states (Halbesleben et al., 2014), adversely impacting work engagement. van Wingerden and colleagues' (2017b) longitudinal job crafting intervention study stressed that participants who were unable to implement their intended job crafting activities be given special attention, as
negative job crafting experiences can contribute to cynicism. Given the role job crafting success plays in work outcomes, higher perceived success is expected to positively amplify the relationships between crafting and work engagement. As such, it is hypothesized (Figure 5) that:

H5: Job crafting success moderates the relationship between promotion and prevention-focused job crafting and work engagement, (H5a) positively increasing the relationship between promotion-focused job crafting and work engagement, and (H5b) positively increasing the relationship between prevention-focused job crafting and work engagement.

Figure 5. Full theoretical model incorporating hypothesized moderating effects of job crafting success on the hypothesized relationships between promotion- and prevention-focused job crafting and work engagement. Green = positive path coefficient, red = negative path coefficient.

Chapter 4: Methods

Sample

Sim and colleagues' (2022) Monte Carlo simulations found the minimum sample size to be between 150 (medium effect size) – 1,170 (small effect size) for parallel mediation analysis.
with two mediators. Wolf et al. (2013) estimated the minimum sample size to be around 450 for mediation models with path coefficients of .25 in their Monte Carlo simulation study.

Based on the findings from these two studies, (N = 500) participants were recruited for this study to account for respondent attrition. Participants were recruited from the United States through the CloudResearch Connect platform. Using Connect’s targeted recruitment tools, only potential respondents in the participant pool who have identified that they are 18 years of age or older, fluent in English, employed full-time, and engaged in partial or full telecommuting received an invitation to take part in the study.

Of the final sample of participants (N = 433) retained for analyses, 69.5% (n = 301) identified as hybrid workers and 30.5% (n = 132) worked fully remotely. The participants’ job level ranged from (n = 42) entry level, (n = 202) professional or skilled worker, (n = 150) manager, (n = 27) director, to (n = 12) executive. The average tenure of participants at their organizations is 5.76 years. The respondents were generally well-educated, with (n = 1) having some high school or less, (n = 21) having a high school diploma or GED, (n = 53) having some college, but no degree, (n = 43) having an associates or technical degree, (n = 216) having a bachelor’s degree, and (n = 99) having a graduate or professional degree. The age range of the participants reflects that of the working population, with (n = 17) 18-24 years of age, (n = 139) 25-34 years of age, (n = 140) 35-44 years of age, (n = 77) 45-54 years of age, (n = 52) 55-64 years of age, and (n = 8) 65+ years of age. 54.3% (n = 235) of participants described themselves as male, 45% (n = 195) as female, and 0.7% (n = 3) as non-binary/third gender. Most participants identified as (n = 331) White or Caucasian, with the remainder identifying as (n = 42) Black or African American, (n = 1) Native American or Alaskan Native, (n = 44) Asian, (n = 1) Native
Hawaiian or other Pacific Islander, (n = 10) other, and (n = 4) preferred not to disclose their ethnicity.

Procedure

The survey was hosted on the Qualtrics platform. Participants were provided with an informed consent form that outlines the eligibility criteria to participate in the study, the purpose of the study, potential benefits and risks, confidentiality, and other required IRB information. After receiving their informed consent, participants were asked to provide information about their remote work resources and demands. Respondents were then asked to complete an attention check. Following the attention check, the participants were presented with scales measuring their job crafting behaviors and perceived job crafting success. Subsequently, participants were administered the UWES-9 (Schaufeli et al., 2006) to measure their levels of work engagement. Control variables such as age, gender, tenure, and demographic information about the participants’ work arrangements, job level, tenure, education level, and ethnicity were collected at the end of the survey. To ameliorate some of the causes of common method bias (Kock, 2015; Podsakoff et al., 2003), the scales in each section were displayed in a randomized order, and the items within each scale were randomized in their sections. Upon completion of the study, participants were debriefed on the purpose of the research and compensated $1.15 for their time, which reflects an above minimum-wage rate of $8.63/hour.

Measures

Job Autonomy. Job Autonomy was measured using three items from the Work Design Questionnaire (WDQ – Job Autonomy; Morgeson & Humphrey, 2006; Appendix A1) representing work scheduling autonomy, decision-making autonomy, and work methods autonomy. Sample items include: “The job allows me to make my own decisions about how to
schedule my work”. The original response set is a 5-point Likert scale ranging from (1) *Strongly disagree* to (5) *Strongly agree*. To remain consistent with other scales in the section, the response set was expanded to a 7-point Likert scale ranging from (1) *Strongly disagree* to (7) *Strongly agree* in this study. Good internal consistency was observed for the measure (α = .85).

**Social Support.** Social Support was measured using four items from the Work Design Questionnaire (WDQ - Social Support; Morgeson & Humphrey, 2006; Appendix A2). The original response set is a 5-point Likert scale ranging from (1) *Strongly disagree* to (5) *Strongly agree*, and a sample item is “I have the opportunity to develop close friendships in my job.” To remain consistent with other scales in the section, the response set was expanded to a 7-point Likert scale ranging from (1) *Strongly disagree* to (7) *Strongly agree* in this study. Adequate internal consistency was observed for the scale (α = .82).

**Organizational Support.** Perceived organizational support was evaluated using eight items from the shortened version of the Survey of Perceived Organizational Support (Neves & Eisenberger, 2014; Appendix A3). The measure includes both positively worded items: “My organization takes pride in my accomplishments at work” and reverse-coded negatively worded items: “My organization fails to appreciate any extra effort from me”. The response set is a 7-point Likert scale ranging from (1) *Strongly disagree* to (7) *Strongly agree*. Strong internal consistency was reported for the scale (α = .94).

**Feedback.** Feedback was measured using three items from the Work Design Questionnaire (WDQ – Feedback; Morgeson & Humphrey, 2006; Appendix A4). A sample item is: “I receive feedback on my performance from other people in my organization (such as my manager or coworkers)”. The original response set is a 5-point Likert scale ranging from (1) *Strongly disagree* to (5) *Strongly agree*. To remain consistent with other scales in the section, the
response set was expanded to a 7-point Likert scale ranging from (1) Strongly disagree to (7) Strongly agree in this study. Satisfactory internal consistency was reported for the measure (α = .83).

**Work-life Conflict.** Work-life Conflict was measured using five adapted items from Netemeyer et al.'s (1996) Work-Family Conflict Scale (Appendix A5). Several items were adapted to fit a broader range of participant contexts by changing the word “family” to “personal”. A sample item: “The amount of time my job takes up makes it difficult to fulfill personal responsibilities”. The items are responded to using a 7-point Likert-type scale ranging from (1) Strongly disagree to (7) Strongly agree. Strong internal consistency was reported for the scale over three studies (α = .96).

**Professional Isolation.** Participant perception of professional isolation was assessed using seven items from the professional isolation scale developed by Golden and colleagues (2008, Appendix A6). The items in the measure were developed through guided semi-structured interviews with professional-level employees and validated through factor analyses. Example items include “I feel left out on activities and meetings that could enhance my career” and “I miss informal interaction with others”. The original response set is a 5-point Likert-type scale ranging from (1) Rarely to (5) Most of the time. To remain consistent with other scales in the section, the response set was expanded to a 7-point Likert scale ranging from (1) Never to (7) Always in this study. Satisfactory internal consistency was observed for the scale (α = .88).

**Techno-overload.** Techno-overload was measured using four items from the Techno-overload Scale (Ragu-Nathan et al., 2008, Appendix A7). Example items include: “I am forced by technology to work with very tight time schedules” and “I am forced to change my work habits to adapt to new technologies”. The original response set is a 5-point Likert scale ranging
from (1) *Strongly disagree* to (5) *Strongly agree*. To remain consistent with other scales in the section, the response set was expanded to a 7-point Likert scale ranging from (1) *Strongly disagree* to (7) *Strongly agree* in this study. There was strong internal consistency between the four items ($\alpha = .90$).

**Role Ambiguity.** Role ambiguity will be measured with four items from the new role ambiguity scale developed by Bowling and colleagues (2017, Appendix A8). This new scale was built upon the original role ambiguity scale (Rizzo et al., 1970) to address criticisms concerning its content validity and that all the items were reverse-scored. Example items in the role ambiguity scale (Bowling et al., 2017) include: “I often don’t know what is expected of me at work” and “My job duties are clearly defined” (reverse-coded). The response set is a 7-point Likert scale ranging from (1) *Strongly disagree* to (7) *Strongly agree*. Robust internal consistency was observed for the scale ($\alpha = .90$).

**Job Crafting Behaviors.** Job crafting behaviors was measured using a revised version of Bindl and colleagues' (2019) Job Crafting Questionnaire (JCQ-R; Appendix A9). Two revisions were made to the JCQ to address discriminant validity and scale reliability issues identified in a previous study conducted using this instrument on remote workers (Chen, 2022b). The study found PRO-SC and PRE-SC factors to have concerningly high covariance (.95), indicating that they were measuring the same latent variable. As the PRE-SC items had lower factor loadings than the PRO-SC items, the three PRE-SC items were rewritten to differentiate them from the PRO-SC items. For example, “I channeled my efforts at work towards maintaining a specific area of expertise” was changed to “I sought to maintain my current skills over learning new skills at work”.
Two of the three PRE-CC items were removed from analysis in the study due to poor reliability. However, the PRE-CC factor, represented by the remaining item, still had high covariance (.74) with the PRO-CC factor, suggesting issues with discriminant validity. As such, it was decided to remove the entire PRE-CC scale from the JCQ and only measure cognitive crafting as a promotion-focused job crafting construct. This approach aligns with other promotion- and prevention-focused job crafting operationalizations in which cognitive crafting is either presented as a neutral (Weseler & Niessen, 2016) or solely promotion-focused (metacognition; Bruning & Campion, 2018) form of job crafting.

Furthermore, as the level of success at accomplishing job crafting behaviors were assessed separately using another measure, some items in the JCQ were reworded to avoid the presumption that the outcome of the behavior was achieved. For example, “I minimized my interactions with people at work that I did not get along with” was changed to “I tried to minimize my interactions with people at work that I did not get along with”. An added benefit of these changes is more consistent wording across items.

The JCQ-R consists of 21 items representing seven dimensions reflecting promotion- and prevention-focused job crafting. Sample items include: “I actively sought to meet new people at work” (PRO-RC); “I actively tried to take on more tasks in my work” (PRO-TC); and “I actively tried to reduce the scope of tasks I worked on.” (PRE-TC). The response set is a 5-point Likert-type scale ranging from (1) Not at all to (5) A great deal. Adequate internal consistencies were observed for each dimension using the original items in a prior study on remote workers (α = .90, PRO-RC; α = .78, PRE-RC; α = .89, PRO-SC; α = .74, PRE-SC; α = .84, PRO-TC; α = .73 PRE-TC; α = .77, PRO-CC).


**Perceived Job Crafting Success.** The level of success at job crafting efforts was measured by asking respondents how often they were successful at their efforts in the job crafting behaviors they reported engaging *moderately to a great deal* in the section. The response set is a 7-point Likert-type scale ranging from (1) *Never* to (7) *Always.*

**Work Engagement.** Work engagement was measured using the Utrecht Work Engagement Scale (UWES-9; Schaufeli et al., 2006; Appendix A10), widely used by researchers exploring the relationship between job crafting and work engagement (Tims et al., 2012; van Wingerden, Derks, et al., 2017). The UWES-9 comprises nine items representing three dimensions: Absorption, Vigor, and Dedication. Sample items include: “I feel happy when I am working intensely.” (Absorption); “At my work, I feel bursting with energy.” (Vigor); and “I am enthusiastic about my job.” (Dedication). One item in the scale: “When I get up in the morning, I feel like going to work.” was slightly adjusted to “When I get up in the morning, I feel like working.” to fit the remote work context of this study. The response set is a 7-point Likert-type scale ranging from (0) *Never* to (6) *Always.* The scale shows satisfactory internal consistency in prior research (Schaufeli et al., 2006). Strong internal consistency was observed for the scale in this study (*α* = .94).

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**Chapter 5: Analyses and Results**

**Preliminary Data Analysis and Cleaning**

The collected data was first examined for structural integrity and appropriateness for data analysis. There were no participants with large amounts of missing data. Responses from participants who took less than half the median time (8 minutes) to complete the survey (n = 45) or exhibited ‘straight-lining’ response behavior (n = 10) were removed via listwise deletion. Multivariate outliers (n = 12) were identified and removed. Parameters with small amounts of
missing data (n = 3) were estimated using the Full Information Maximum Likelihood (FIML) strategy. No items with high multicollinearity (VIF < 5, tolerance > .20) were detected. The final dataset consisted of (N = 433) participants for analyses.

Normality of the data was confirmed through skew (±3 ≥) and kurtosis (±10 ≥) using descriptive statistics (Kline, 2015). Multivariate normality of the data was checked using Mardia’s (1970) skew and kurtosis and the Henze-Zirkler test. Robust maximum likelihood estimation was used for relevant analyses because the assumption of multivariate normality was violated (p ≥ .05). The plots of residuals were examined for homoskedasticity, and this assumption was not violated. Finally, internal consistency was tested with Cronbach’s Alpha, confirming adequate reliability of α > .70 for each scale. A summary of means and standard deviations of all variables used for analyses is provided in Table 1; correlation coefficients and reliability can be found in Table 2.

Table 1.
Means and Standard Deviations

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autonomy</td>
<td>5.52</td>
<td>1.21</td>
</tr>
<tr>
<td>Social Support</td>
<td>5.41</td>
<td>1.14</td>
</tr>
<tr>
<td>Feedback</td>
<td>5.43</td>
<td>1.10</td>
</tr>
<tr>
<td>Perceived Org. Support</td>
<td>4.85</td>
<td>1.37</td>
</tr>
<tr>
<td>Work Life Conflict</td>
<td>3.28</td>
<td>1.69</td>
</tr>
<tr>
<td>Professional Isolation</td>
<td>3.03</td>
<td>1.23</td>
</tr>
<tr>
<td>Techno-overload</td>
<td>3.13</td>
<td>1.48</td>
</tr>
<tr>
<td>Role Ambiguity</td>
<td>2.79</td>
<td>1.37</td>
</tr>
<tr>
<td>Prom-Relational Crafting*</td>
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<td>1.08</td>
</tr>
<tr>
<td>Prom-Skill Crafting*</td>
<td>3.30</td>
<td>.99</td>
</tr>
<tr>
<td>Prom-Task Crafting*</td>
<td>2.23</td>
<td>1.02</td>
</tr>
<tr>
<td>Prom-Cognitive Crafting*</td>
<td>2.02</td>
<td>.92</td>
</tr>
<tr>
<td>Prev-Relational Crafting*</td>
<td>2.61</td>
<td>.93</td>
</tr>
<tr>
<td>Prev-Skill Crafting*</td>
<td>2.02</td>
<td>.92</td>
</tr>
<tr>
<td>Prev-Task Crafting*</td>
<td>2.61</td>
<td>.93</td>
</tr>
<tr>
<td>Prom-Crafting Success</td>
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<td>1.09</td>
</tr>
<tr>
<td>Prev-Crafting Success</td>
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<td>1.11</td>
</tr>
<tr>
<td>Age</td>
<td>4.07</td>
<td>1.14</td>
</tr>
<tr>
<td>Gender</td>
<td>1.46</td>
<td>.51</td>
</tr>
</tbody>
</table>
Parallel Mediation Analysis

Parallel mediation analysis was conducted using R (version 4.3.0) to investigate

Hypotheses 1-4. Structural equation modeling (SEM) was used to specify the model structure and test mediation pathways. Based on the theoretical model (Chapter 3, Figure 4), the test
model consisted of five latent factors: Remote Work Resources, Remote Work Demands, Promotion-focused Job Crafting, Prevention-focused Job Crafting, and Work Engagement. Control variables (age, gender, tenure, and remote work status) were also included in the model. Due to the non-multivariate normal distribution of the data, SEM analysis was performed using maximum likelihood estimation with robust standard errors (MLR), which corrected for standard errors induced by non-normality (Finney & DiStefano, 2006). Most of the factor components displayed adequate standardized factor loadings (> .60) except for autonomy (.47), professional isolation (.54), and one item from the UWES-9 (Schaufeli et al., 2006) work engagement scale (.51). However, it was decided to retain these borderline loading components for analyses based on prior theory and the finding that removal of the components did not substantially improve model fit. The model was determined to acceptably fit the collected data (Table 3).

Table 3.

<table>
<thead>
<tr>
<th>Model Fit Indices</th>
<th>$\chi^2$</th>
<th>df</th>
<th>$\chi^2/df$</th>
<th>CFI</th>
<th>SRMR</th>
<th>RMSEA</th>
<th>RMSEA CI</th>
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<tbody>
<tr>
<td>Five-factor Model</td>
<td>1012.33</td>
<td>326</td>
<td>3.11</td>
<td>.89</td>
<td>.06</td>
<td>.07</td>
<td>[.07, .08]</td>
</tr>
</tbody>
</table>

Note. N = 433. *** p < .001. $\chi^2$ = model chi-squared value scaled with Yuan-Bentler correction factor, df = degrees of freedom, CFI = Comparative Fit Index (robust), SRMR = Standardized Root Mean Square Residual, RMSEA = Root Mean Square Error of Approximation (robust).

In the parallel mediation analysis, remote work resources and demands were specified as the independent variables (IVs), promotion- and prevention-focused job crafting as the mediators, and work engagement as the dependent variable (DV). A positive and significant path coefficient ($\beta = .44, p < .001$) was detected for the direct effect between remote work resources and work engagement, confirming H1. Although negative as hypothesized, the path coefficient for the direct effect ($\beta = -.10, p = .13$) between remote work demands and work engagement was not significant, and H2 was rejected. The path coefficients between remote work resources and promotion-focused job crafting ($\beta = .74, p < .001$) and between promotion-focused job crafting
and work engagement ($\beta = .45, p < .001$) were both positive and significant, supporting H3a and H3c. Surprisingly, remote work demands were found to be positively and significantly linked to promotion-focused job crafting ($\beta = .39, p < .001$), which does not support the hypothesized (H3b) negative relationship between the two variables. Both indirect effects from remote work resources $\rightarrow$ promotion-focused job crafting $\rightarrow$ work engagement ($\beta = .33, p < .001$) and remote work demands $\rightarrow$ promotion-focused job crafting $\rightarrow$ work engagement ($\beta = .18, p < .001$) were positive and significant, confirming promotion-focused job crafting as a mediator between the relationships (H3). The aforementioned direct effect findings (H1 and H2) indicate that promotion-focused job crafting partially mediates the relationship between remote resources and work engagement and fully mediates the relationship between remote work demands and work engagement.

While the path coefficient between remote work resources and prevention-focused job crafting ($\beta = -.12, p = .23$) was negative as hypothesized, it was not significant, and H4a was rejected. The relationship between prevention-focused job crafting and work engagement was also negative and non-significant ($\beta = -.06, p = .19$), which did not support H4c. However, the path coefficient between remote work demands and prevention-focused job crafting was positive and significant ($\beta = .35, p < .001$), confirming H4b. Hypothesis 4 (H4) was not supported by the analysis findings as both indirect effects between remote work resources $\rightarrow$ prevention-focused job crafting $\rightarrow$ work engagement ($\beta = .01, p = .36$), and remote work demands $\rightarrow$ prevention-focused job crafting $\rightarrow$ work engagement ($\beta = -.02, p = .22$) were not significant, thereby indicating that prevention-focused job crafting is not a mediator in the model.

In summation, the parallel mediation analysis found promotion-focused job crafting to mediate the relationships between remote work resources, remote work demands, and work engagement.
engagement. One particularly surprising finding is that participants with higher remote work demands tend to engage in both types of job crafting. However, only those who employed promotion-focused crafting behaviors experienced higher levels of work engagement. Figure 6 presents a visual representation of these findings. Detailed parallel analysis results can be found in Tables 4 and 5.

![Figure 6. SEM parallel mediation analysis results.](image)

**Note.** $\beta =$ Standardized path coefficient. ** $p < .001$. Solid lines represent significant path coefficients, and dashed lines represent non-significant path coefficients. Only higher-order factors are displayed in the figure; control variables (age, gender, tenure, remote work status) are also present in the model but omitted in the figure.

<table>
<thead>
<tr>
<th></th>
<th>$b$</th>
<th>$\beta$</th>
<th>Standard Error</th>
<th>Significance</th>
<th>95% CI [LW, UP]</th>
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</thead>
<tbody>
<tr>
<td>H1</td>
<td>1.02</td>
<td>.44</td>
<td>.19</td>
<td>$p &lt; .001$</td>
<td>[.65, 1.39]</td>
</tr>
<tr>
<td>H2</td>
<td>-.12</td>
<td>-.10</td>
<td>.08</td>
<td>$p = .13$</td>
<td></td>
</tr>
<tr>
<td>H3a</td>
<td>1.01</td>
<td>.74</td>
<td>.17</td>
<td>$p &lt; .001$</td>
<td>[.68, 1.35]</td>
</tr>
<tr>
<td>H3b</td>
<td>.26</td>
<td>.39</td>
<td>.07</td>
<td>$p &lt; .001$</td>
<td>[.12, .40]</td>
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<tr>
<td>H3c</td>
<td>.74</td>
<td>.45</td>
<td>.10</td>
<td>$p &lt; .001$</td>
<td>[.56, .93]</td>
</tr>
<tr>
<td>H4a</td>
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<td>-.12</td>
<td>.12</td>
<td>$p = .23$</td>
<td></td>
</tr>
<tr>
<td>H4b</td>
<td>.22</td>
<td>.35</td>
<td>.06</td>
<td>$p &lt; .001$</td>
<td>[.10, .34]</td>
</tr>
</tbody>
</table>
Note. N = 433. \( b \) = Unstandardized Path coefficient, \( \beta \) = Standardized Path Coefficient, 95\% CI [LW, UP] = 95\% Confidence Interval [Lower Bound, Upper Bound]. Confirmed hypotheses are bolded in the table.

Table 5. Parallel Mediation Analysis: Direct, Indirect, and Total Effects

<table>
<thead>
<tr>
<th>Path</th>
<th>Direct Effect</th>
<th>1.02</th>
<th>.44</th>
<th>.19</th>
<th>( p &lt; .001 )</th>
<th>[.65, 1.39]</th>
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<tbody>
<tr>
<td>H2</td>
<td>Direct Effect</td>
<td>-.12</td>
<td>-.10</td>
<td>.08</td>
<td>( p = .13 )</td>
<td>[-.26, .03]</td>
</tr>
<tr>
<td>H3</td>
<td>IE: H3a * H3c</td>
<td>.76</td>
<td>.33</td>
<td>.16</td>
<td>( p &lt; .001 )</td>
<td>[.44, 1.07]</td>
</tr>
<tr>
<td>H4</td>
<td>IE: H4a * H4c</td>
<td>.02</td>
<td>.01</td>
<td>.02</td>
<td>( p = .36 )</td>
<td>[-.02, .05]</td>
</tr>
<tr>
<td>H4</td>
<td>IE: H4b * H4c</td>
<td>-.02</td>
<td>-.02</td>
<td>.02</td>
<td>( p = .22 )</td>
<td>[-.06, .01]</td>
</tr>
<tr>
<td>--</td>
<td>TE: Resources</td>
<td>1.79</td>
<td>.78</td>
<td>.23</td>
<td>( p &lt; .001 )</td>
<td>[1.34, 2.24]</td>
</tr>
<tr>
<td>--</td>
<td>TE: Demands</td>
<td>.06</td>
<td>.05</td>
<td>.08</td>
<td>( p = .45 )</td>
<td>[-.09, .21]</td>
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</tbody>
</table>

Moderation Analysis

Hierarchical regression was used to test the moderating effect of perceived job crafting success on the relationship between job crafting and work engagement, as proposed in Hypothesis 5. Job crafting components were first averaged to create aggregate scores representing promotion- and prevention-focused crafting. In Step 1, a baseline model was specified with promotion-focused job crafting, prevention-focused job crafting, perceived promotion-focused job crafting success, perceived prevention-focused job crafting success, and control variables (age, gender, tenure, remote work status) predicting work engagement. Interaction terms were then added to the hierarchical model in Step 2. The IVs, moderators, and DVs were analyzed as pseudo-continuous variables. Utilizing Baron and Kenny's (1986) approach to moderation analysis, an ANOVA was conducted to compare the baseline and hierarchical models.
H5a was not supported by the findings as the interaction term for promotion-focused job crafting and perceived promotion-focused job crafting success was not significant. Although perceived success of promotion-focused job crafting did not emerge as a moderator, it is a significant predictor of work engagement ($b = .27, p < .01$), such that participants who experienced higher job crafting success also had higher work engagement (Figure 7).

![Moderation Effect](image)

**Figure 7. No Moderation Effect Detected for Perceived Job Crafting Success (SOC) on Promotion-focused Job Crafting (PRO-JC) and Work Engagement (WKE).**

However, the interaction term for prevention-focused job crafting and perceived crafting success was positive and significant ($b = .16, p < .01$), indicating that perceived prevention-focused job crafting success positively impacted the relationship between prevention-focused job crafting and work engagement. Thus, Hypothesis 5 is partially confirmed, with H5a rejected and H5b supported. As presented in Figure 8, work engagement decreases with higher levels of prevention-oriented job crafting. However, this drop in work engagement is minimal for
participants with high crafting success compared to those with low crafting success. Full hierarchical regression results can be found in Table 6.

![Moderation Effect](image)

**Figure 8.** Moderation effect of Perceived Job Crafting Success (SEC) on Prevention-focused Job Crafting (PRE-JC) and Work Engagement (WKE).

**Table 6.**

Moderation Analysis Results: Hierarchical Regression Predicting Work Engagement

<table>
<thead>
<tr>
<th></th>
<th>Step 1</th>
<th></th>
<th></th>
<th>Step 2</th>
<th></th>
<th></th>
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<tr>
<td></td>
<td>b</td>
<td>SE</td>
<td></td>
<td>b</td>
<td>SE</td>
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<td><strong>Control Variables</strong></td>
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<tr>
<td>Age</td>
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<td>.04</td>
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<td>-.09</td>
<td>.09</td>
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<td>.00</td>
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<td><strong>Independent Variables</strong></td>
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<tr>
<td>PRO-JC</td>
<td>.66**</td>
<td>.06</td>
<td></td>
<td>.62**</td>
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<td>PRE-JC</td>
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<td>.06</td>
<td></td>
<td>1.08**</td>
<td>.23</td>
<td></td>
</tr>
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<td><strong>Moderating Variables</strong></td>
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<td>SOC</td>
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<td>.05</td>
<td></td>
<td>.27**</td>
<td>.10</td>
<td></td>
</tr>
<tr>
<td>SEC</td>
<td>.14**</td>
<td>.05</td>
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<td><strong>Interaction Terms</strong></td>
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<tr>
<td>PRO-JC*SOC</td>
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<td>--</td>
<td></td>
<td>.00</td>
<td>.04</td>
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<tr>
<td>PRE-JC*SEC</td>
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<td>--</td>
<td></td>
<td>.16**</td>
<td>.04</td>
<td></td>
</tr>
</tbody>
</table>
**Note.** N = 433. **p < .001. Step 1 (F = 55.84**, R² = .51), Step 2 (F = 47.28**, R² = .53), ANOVA (F = 6.86**). *b* = Unstandardized Beta, SE = Standard Error, PRO-JC = Promotion-focused Job Crafting, PRE-JC = Prevention-focused Job Crafting, SOC = Perceived Promotion-focused Job Crafting Success, SEC = Perceived Prevention-focused Job Crafting Success.

**Supplementary Analyses**

Several post-hoc analyses were run to investigate the findings from the hypotheses testing further. Linear regression was used to identify which aspects of remote work resources were stronger predictors of work engagement among the sample of hybrid and remote workers. Autonomy, social support, perceived organizational support, feedback, and control variables (age, gender, tenure, and remote work status) were entered as predictors, and work engagement was the dependent variable. Autonomy (*b* = .16, SE = .04, *p < .001), social support (*b* = .21, SE = .06, *p < .001), and perceived organizational support (*b* = .42, SE = .05, *p < .001) were identified as significant predictors of work engagement. The control variables of age and remote work status also have significant relationships with work engagement, indicating that older participants and those who worked remotely less frequently experienced higher levels of work engagement. Regression statistics are presented in Table 7.

**Table 7. Linear Regression: Remote Work Resources Predicting Work Engagement**

<table>
<thead>
<tr>
<th></th>
<th>b</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Control Variables</strong></td>
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<td></td>
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<tr>
<td>Age</td>
<td>.09*</td>
<td>.04</td>
</tr>
<tr>
<td>Gender</td>
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<td>.09</td>
</tr>
<tr>
<td>Tenure</td>
<td>-.02</td>
<td>.02</td>
</tr>
<tr>
<td>Remote Work</td>
<td>-.10*</td>
<td>.04</td>
</tr>
<tr>
<td><strong>Independent Variables</strong></td>
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<td></td>
</tr>
<tr>
<td>Autonomy</td>
<td>.16***</td>
<td>.04</td>
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<tr>
<td>Social Support</td>
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<td>.05</td>
</tr>
<tr>
<td>Feedback</td>
<td>-.01</td>
<td>.06</td>
</tr>
</tbody>
</table>

**Note.** N = 433. * p < .05, *** p < .001. F = 44.67, R² = .46.
As there was a strong positive path coefficient between remote work resources and promotion-focused job crafting, linear regression was utilized to identify which components of work resources were most important for this relationship. Autonomy, social support, perceived organizational support, feedback, and control variables (age, gender, tenure, and remote work status) were inputted as predictors, and promotion-focused job crafting was the dependent variable. Social support ($b = .17, SE = .05, p < .001$) and perceived organizational support ($b = .15, SE = .04, p < .001$) emerged as the strongest contributors to promotion-focused job crafting. The control variable of remote work status ($b = -.10, SE = .03, p < .001$) had a significant negative beta coefficient, suggesting that less engagement in remote work is linked to higher levels of promotion-focused job crafting. The regression results for all variables can be found in Table 8.

Table 8. Linear Regression: Remote Work Resources Predicting Promotion-focused Job Crafting

<table>
<thead>
<tr>
<th>Control Variables</th>
<th>$b$</th>
<th>SE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>-.03</td>
<td>.04</td>
</tr>
<tr>
<td>Gender</td>
<td>-.02</td>
<td>.08</td>
</tr>
<tr>
<td>Tenure</td>
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<tr>
<td>Remote Work Status</td>
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<tr>
<td>Independent Variables</td>
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<tr>
<td>Autonomy</td>
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<tr>
<td>Social Support</td>
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<tr>
<td>Perceived Org. Support</td>
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<td>Feedback</td>
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*Note. N = 433. ** $p < .01$, *** $p < .001$. F = 36.90, $R^2 = .41$.*

The parallel mediation analysis found remote work demands to have significant positive paths to both promotion- and prevention-focused job crafting. Therefore, multivariate multiple regression was run to understand how the individual work demands components contribute to each pathway. Work-life conflict, techno-overload, professional isolation, role ambiguity, and control variables (age, gender, tenure, and remote work status) were entered as predictor
variables, with promotion- and prevention-focused job crafting as dependent variables.

Professional isolation ($b = .13$, $SE = .04$, $p < .001$) and role ambiguity ($b = -.16$, $SE = .03$, $p < .001$) were found to be the strongest predictors of promotion-focused job crafting. As with the previous linear regression, remote work status was also significantly associated with promotion-focused job crafting ($b = -.13$, $SE = .04$, $p < .001$). Techno-overload ($b = .08$, $SE = .03$, $p < .001$) and professional isolation ($b = .07$, $SE = .03$, $p < .05$) emerged as the strongest contributors to prevention-focused job crafting. Age was also a significant predictor ($b = -.18$, $SE = .03$, $p < .001$), indicating that younger participants engaged in higher levels of prevention-focused job crafting. Interestingly, professional isolation was indicated as a significant predictor for both promotion- and prevention-focused job crafting, although the beta and significance were weaker for predicting prevention-focused crafting compared to promotion-focused crafting. Table 9 provides summaries of findings for all variables.

Table 9. 
**Multivariate Regression: Remote Work Demands Predicting Job Crafting**

<table>
<thead>
<tr>
<th></th>
<th>Promotion-focused Job Crafting</th>
<th>Prevention-focused Job Crafting</th>
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<tbody>
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<td><strong>Control Variables</strong></td>
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<td><strong>Independent Var.</strong></td>
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<td>RLA</td>
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</table>

_Note._ $N = 433$. *$p < .05$, **$p < .01$, ***$p < .001$. Promotion-focused Job Crafting ($F = 6.24$, $R^2 = .11$), Prevention-focused Job Crafting ($F = 10.64$, $R^2 = .17$). WLC = Work-life Conflict, TCO = Techno-overload, PFI = Professional Isolation, RLA = Role Ambiguity.
Finally, due to the significant positive path between promotion-focused job crafting and work engagement, another linear regression was conducted to identify the crafting components that contributed the most to this relationship. Promotion-focused relational, skill, task, and cognitive crafting, along with control variables (age, gender, tenure, and remote work status), were specified as predictors, and work engagement was the dependent variable. The regression findings indicate promotion-focused relational \((b = .18, \ SE = .06, \ p < .001)\), skill \((b = .23, \ SE = .07, \ p < .001)\), and cognitive crafting \((b = .49, \ SE = .07, \ p < .001)\) to be significant contributors to work engagement. Task crafting was the only promotion-focused job crafting component not significantly associated with work engagement. One important finding is that while the cognitive component of job crafting most often excluded in prior research (Niessen et al., 2016; Slemp & Vella-Brodrick, 2013), it emerged as the strongest predictor of work engagement in this study. Regression results for all variables can be found in Table 10.

Table 10.  
*Linear Regression: Promotion-focused Job Crafting Predicting Work Engagement*

<table>
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<tr>
<td><strong>Control Variables</strong></td>
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<td>Remote Work Status</td>
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<td><strong>Independent Variables</strong></td>
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<tr>
<td>Prom. Skill Crafting</td>
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<td>Prom. Task Crafting</td>
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<tr>
<td>Prom. Cognitive Crafting</td>
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<td>.07</td>
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</table>

Note. N = 433. ** \(p < .01\), *** \(p < .001\). \(F = 36.90\), \(R^2 = .41\).
Chapter 6: Discussion

Although most hypotheses were only partially confirmed, the study findings generally align with prior theory and empirical research on the topics investigated in this dissertation. In the following sub-sections, I will interpret and discuss each key finding (Figure 9).

![Figure 9. Visual representation of hypotheses testing results.](image)

*Note.* Green = positive relationship, red = negative relationship, solid line = significant relationship, dashed line = non-significant relationship. Supported hypotheses are bolded.

**Remote Work Resources and Work Engagement**

Hypothesis 1 was supported by the parallel mediation results, indicating that having more remote work resources is linked with increased work engagement. This finding aligns with JDR theory (Bakker & Demerouti, 2007) and prior research on remote work resources and engagement (Sardeshmukh et al., 2012). While feedback had a significant positive correlation with work engagement, supplementary analyses discovered that feedback was not a significant predictor of work engagement in a regression with other resource components. An explanation of this discrepancy could be that the effect of feedback on work engagement is suppressed by
perceived organizational support due to measurement error. JDR theory posits that work resources can positively affect engagement through the intrinsic pathway of satisfying the basic human needs of autonomy, relatedness, and competence (Bakker & Demerouti, 2007). The feedback scale used in this study only measures the likelihood of receiving feedback on one’s work but not the type of feedback received. Therefore, a participant who frequently receives vague or negative feedback would score highly on the feedback scale but not have their need for competence satisfied. On the other hand, the POS scale includes items encompassing being recognized for one’s contribution to their organization, which may make it a more robust measure of a work resource satisfying the need for competence.

Another interesting finding is that while autonomy is often regarded as one of the essential remote work resources (Galanti et al., 2021; Wang et al., 2021), it had the weakest loading in the remote work resources factor. This could be due to external considerations constraining the autonomy one receives in their job. For example, of all the resource components, only autonomy was significantly correlated with tenure, indicating that newer employees may be allowed less autonomy while still receiving similar amounts of social support, feedback, and organizational support as their more established counterparts.

**Remote Work Demands and Work Engagement**

Although the path coefficient between remote work demands and work engagement was negative as predicted, it was not significant, thus not supporting Hypothesis 2. While prior research has found higher levels of sustained work demands to lead to exhaustion and lower work engagement over time (Schaufeli & Bakker, 2004), it could be possible that some participants may not have experienced enough sustained work demands over time to affect work engagement. As this study was conducted cross-sectionally, it is difficult to account for the
duration of work demands experienced by each participant. Furthermore, the relationship between work demands and job crafting may explain the non-significance of the pathway. Higher work demands equally predicted promotion- and prevention-focused job crafting. However, participants who utilized promotion-focused job crafting experienced higher work engagement, while those who engaged in prevention-focused job crafting did not. This split between job crafting utilization may offset the direct effects between work demands and engagement, thus explaining the non-significant pathway.

**Promotion- and Prevention-focused Job Crafting**

Hypothesis 3 was confirmed by the study results in that promotion-focused job crafting mediated the relationships between remote work resources, demands, and work engagement. As hypothesized, having higher remote work resources was associated with more promotion-focused job crafting behaviors and higher work engagement. Post-hoc analyses revealed that social support and perceived organizational support were the most important remote work resources in predicting promotion-focused job crafting. With more robust support networks, trust, and visibility in their organization, remote workers are encouraged to take on risker, expansion-oriented behaviors that positively impact their well-being (Neves & Eisenberger, 2014).

However, higher work demands were also found to be positively linked with promotion-focused job crafting instead of the hypothesized negative relationship (H3b), with promotion-focused job crafting fully moderating the relationship between remote work demands and work engagement in the SEM model. While it was expected that participants already overburdened with high work demands would reduce rather than expand their job boundaries to avoid adding further demands, the findings of this study do align with some prior research. Specifically, (Tims
et al., 2012) theorized that employees experiencing high demands would engage in promotion-focused job crafting towards acquiring resources to buffer demands, and this was found to be true in Ingusci et al.'s (2021) study on remote workers.

Post-hoc linear regression analysis findings on individual promotion-focused job crafting components revealed cognitive, followed by skill and relationship crafting behaviors to be the strongest predictors of work engagement. This is unexpected, as cognitive crafting is often excluded from the resource perspective of job crafting because it is seen as a passive coping strategy (Niessen et al., 2016; Slemp & Vella-Brodrick, 2013). One of the unique characteristics of remote work is increased distance and isolation from coworkers, which makes it more challenging to gain holistic understandings of how one’s work contributes to the organization (Beňo, 2021; Golden et al., 2008). By engaging in cognitive crafting, remote workers reflect on and better comprehend how their jobs fit into their organizations and societies, thereby increasing the meaningfulness of their jobs and careers (Wrzesniewski & Dutton, 2001). As theorized by Kahn (1990) and empirically tested by May and colleagues (2004), meaningfulness is one of the three core psychological conditions for engagement at work. While the debate on whether cognitive crafting is an active behavior or passive coping strategy remains to be settled, the study findings nevertheless indicate it as a valuable tool to enhance work engagement amongst remote workers.

Although prevention-focused job crafting did not emerge as a mediator in the model as hypothesized (H4), this finding is not surprising as prevention-focused job crafting has often been found to have weak or null relationships with work engagement in prior studies on traditional workers (Gordon et al., 2018; Tims, Bakker, Derks, et al., 2013). As previously mentioned, an important finding is that remote work demands were positively linked to both
promotion- and prevention-focused job crafting. Surprisingly, professional isolation was predictive of both types of job crafting. This finding indicates that feelings of seclusion from coworkers and fear of missing out on developmental opportunities often experienced by remote workers (Golden et al., 2008) serve as strong motivators for crafting behaviors. Supplementary analyses conducted to understand the differences between work demand components show that participants experiencing lower role ambiguity were more likely to engage in promotion-focused job crafting. At the same time, those with higher techno-overload were more likely to partake in prevention-focused job crafting. As remote workers often encounter increased autonomy and receive less feedback in their jobs, those with more certainty in their responsibilities may be better equipped to capitalize on expansion-oriented job crafting opportunities.

On the other hand, remote workers who feel that technology adds extra stress and work to their jobs may be keen to reduce their job boundaries to alleviate these additional demands. Age also emerged as a significant predictor in that younger workers are likelier to utilize prevention-focused job crafting. As younger workers tend to be less conscientious, self-confident, and dominant than their older counterparts (Kooij et al., 2017), they may be more attracted to the relative safety of reducing or crafting within their existing job boundaries.

**Job Crafting Success**

The findings partially supported Hypothesis 5, with perceived job crafting success moderating the relationship between prevention-focused job crafting and work engagement. While participants’ levels of work engagement decreased with a higher prevalence of prevention-focused job crafting behaviors, this drop in engagement was significantly less drastic with higher perceived job crafting success. These findings provide evidence to support the regulatory focus theory approach to job crafting and Lichtenthaler and Fischbach's (2019) observations that the
main drivers of the adverse outcomes associated with prevention-focused self-regulation are not just the behaviors themselves but that these efforts are often unsuccessful, prompting negative work role perceptions, increased cynicism, and lower engagement.

The finding that perceived job crafting success did not moderate the relationship between promotion-focused job crafting and work engagement can be best explained using the conservation of resources (COR) theory. Employees must invest resources in activities such as job crafting to build more resources and reduce demands. If the activities are unsuccessful, the loss of invested resources is felt more strongly by those with fewer resources (Hobfoll, 1989). As the SEM analysis confirmed, participants with higher remote work resources tend to engage in more promotion-focused job crafting. Therefore, it can be surmised that failed attempts at promotion-focused job crafting may have reduced negative impacts on work engagement because remote workers who engage in this type of job crafting have enough resources to buffer the loss of investment.

Theoretical Contributions

This study addressed a critical gap in job crafting research. As discussed in Chapter 1, while work engagement is one of, if not the most studied outcomes in prior job crafting research, there is a surprising paucity of similar studies in the remote work context. Findings from this study suggest that previously identified relationships between job crafting and work engagement continue to exist in this new work modality. Classifying remote work characteristics and challenges into resources and demands allowed investigation into bottom-up work design (via job crafting) and top-down approaches by exploring which job characteristics have the most robust relationships with work engagement. The study results also reaffirm the validity of COR and JDR theory in hybrid and remote working populations.
The increasingly divergent role and resource perspectives are a significant concern that plagues job crafting research's validity and long-term outlook (Ebert & Bipp, 2021; Zhang & Parker, 2019). This study integrated these divergent perspectives by building the theoretical model around promotion- and prevention-focused job crafting using Bindl and colleagues' (2019) Job Crafting Questionnaire (JCQ). However, some aspects of the scale have proved problematic when utilized in the remote working population (Chen, 2022b). Specifically, there were extremely high covariances between the promotion- and prevention-focused skill crafting items, suggesting issues with discriminant validity. This study resolved discriminant validity issues by rewriting the prevention-focused skill crafting items to emphasize crafting within one’s current skill boundaries.

Along with measuring cognitive crafting as a solely promotion-focused behavior in line with prior job crafting research (Bruning & Campion, 2018; Weseler & Niessen, 2016), these revisions permitted the seven job crafting dimensions to be consolidated under two superordinate factors (promotion- and prevention-focused). The improved model parsimony facilitates future studies exploring integrated role and resource job crafting behaviors in the hybrid and remote workforce. This study is also the first to explore perceived job crafting success in the remote work context, thus contributing to the broader research around regulatory focus theory, COR theory, gain cycles, and loss spirals.

Chapter 7: Practical Implications

With hybrid and remote working becoming increasingly prevalent (Barrero et al., 2021) and work engagement falling to its lowest point in this decade (Harter, 2023), managers and organizations must consider all available strategies for fostering employee engagement. Due to remote work occurring outside central offices, traditional interventions and programs often
impart less benefits for hybrid and fully remote workers than their in-person counterparts (Golden et al., 2008). As is evident from this study and prior research (Chen, 2022a, 2022b; Costantini & Rubini, 2021; Liu et al., 2021; Stempel & Siestrup, 2022), promotion-focused job crafting continues to be strongly linked with increased engagement in the remote working population. This study provides a framework for individuals and organizations to (1) establish optimal remote work characteristics that encourage promotion-focused job crafting, (2) capitalize on effective job crafting behaviors associated with increased work engagement, and (3) induce self-sustaining gain cycles while preventing/breaking out of self-sabotaging loss spirals.

Work demands are inherent in jobs and can both promote and hinder work engagement (Bakker & Demerouti, 2017). While remote work demands did not directly impact engagement in this study, it predicted both promotion- and prevention-focused job crafting. However, only promotion-focused job crafting was related to increased work engagement. While professional isolation is associated with higher promotion-focused and, to a lesser extent, prevention-focused job crafting, organizations should obviously avoid further isolating their remote workers. Feelings of being left out of career development opportunities and missing interaction with coworkers may motivate remote workers to job craft to change their circumstances, but there is a risk that workers may further withdraw using prevention-focused job crafting and negatively impact their well-being.

On the other hand, managers should make sure their hybrid and remote employees clearly understand their work duties and requirements, as lower role ambiguity is associated with higher promotion-focused job crafting. If employees are unsure what is expected of them at work, it is understandable that they would avoid role expansion behaviors as it may contribute to even greater uncertainty. Hybrid and remote working evolved along with the adoption of novel ICTs
to enable long-distance collaboration. While these new technologies can increase efficiency and productivity (Emanuel et al., 2023), they can also be highly disruptive to pre-existing work processes (Ingusci et al., 2021). Techno-overload, increased work demands due to technology, was found to be the strongest predictor of prevention-focused job crafting in this study. Employees feeling overburdened by the added stressors imparted by new technology are more likely to reduce their work boundaries, resulting in adverse personal and work outcomes (Lichtenthaler & Fischbach, 2019). To avoid the preponderance of prevention-focused job crafting behaviors, employers are encouraged to train employees on incorporating new technologies into their work processes, ensuring that technologies are as free from bugs and other technical issues as possible, and making sure managers continue to set realistic deadlines even with the implementation of more efficient work and collaboration tools.

Work demands and resources synergize to activate the highest levels of motivation and subsequent engagement (Bakker & Demerouti, 2007). This study’s findings indicate that high resources and high demands are associated with promotion-focused job crafting, which is linked with higher work engagement. However, having only high demands relates to prevention-focused job crafting, which is negatively but not significantly associated with work engagement. As such, organizations must provide adequate work resources to buffer demands and build engagement amongst remote workers. Remote workers tend to be siloed and experience more significant difficulties bonding with their coworkers (Beño, 2021; Tremblay & Thomsin, 2012; Wang et al., 2021), and managers should make extra efforts to provide opportunities for their remote employees to expand and develop high-quality relationships with their peers. Having greater social support enhances work engagement by providing the foundation for promotion-
focused relationship crafting and creating camaraderie for shared excitement about new work developments to spread through emotional contagion (Mann et al., 2000).

Furthermore, managers should continuously acknowledge and celebrate remote workers’ contributions to increase workers’ feelings of visibility. Promotion-focused job crafting activities often involve considerable investment of resources, and their efforts to improve themselves and their jobs must not go unnoticed. Although autonomy and feedback are associated with work engagement, they should be provided with caution. While the *autonomy paradox* was not detected in this study, prior research on remote workers have found that although autonomy can foster job crafting behaviors, too much autonomy may increase work demands to unsustainable levels through exploitation by organizations or mismanagement of priorities by employees themselves (Saragih et al., 2021; Zhou, 2020). As emphasized in recent CHRO guidelines, “organizations that support agency without guiding it can see only 25% of their workforce performing optimally” (Gartner, 2023, p. 5). This is especially true in conjunction with the *connectivity paradox*, in which remote workers experience greater flexibility in communicating with others but often feel obliged to respond to emails and tasks outside of working hours.

Feedback is important for improving engagement by satisfying the fundamental human need for competence (Bakker & Demerouti, 2007) and preventing dysfunctional job crafting (Dierdorff & Jensen, 2018). A recently published study conducted in a technology firm found workers in the office to receive 23% more feedback than their remote working counterparts, resulting in higher levels of attrition for remote workers (Emanuel et al., 2023). However, feedback must be either positive or constructive, as purely negative feedback may decrease feelings of competence and adversely impact motivation and engagement (Bakker & Demerouti, 2007). Furthermore, employees continuously receiving overwhelming amounts of feedback may
feel micromanaged, thus hampering the emergence of job crafting behaviors (Wrzesniewski & Dutton, 2001).

It is recommended that hybrid and remote workers focus on developing holistic understandings of how their work impacts their organizations and societies (cognitive crafting), taking advantage of opportunities to learn and master new skills (skill crafting), and broadening and building high-quality relationships in their professional networks (relational crafting). There are many avenues in which employers can support these promotion-focused crafting behaviors for hybrid and remote employees on an organizational level. Onboarding programs can provide the foundation for cognitive crafting by providing remote employees with additional context on how their role fits into the organization and knowledge of potential ‘big picture’ outcomes of their work. Furthermore, onboarding processes emphasizing new hires’ personal identities can help employees better identify and acknowledge their unique contributions to the organization rather than feeling like just another “cog” in the machine, resulting in greater retention (Cable et al., 2013). Companies like Red Bull take a further step in encouraging job crafting by leveraging strengths assessments toward personalized action plans for new hires (Fuller et al., 2023).

Organizations can help enable skill crafting by identifying potential projects and opportunities for reskilling and upskilling their employees. Recent advances in AI and machine learning algorithms can aid the ability to deliver customized learning programs and project opportunities based on each employee’s current and forecasted skillset.

Office luncheons and parties may be an excellent way for in-person workers to deepen relationships, but remote workers who dial in are often left out of conversations. Aside from in-office events, organizations should host additional opportunities to socialize on alternative platforms that are more inclusive for hybrid and remote workers. For example, Accenture offers
a virtual reality (VR) office, One Accenture Place, where employees can play games, engage in group training, and mingle around a digital water cooler. Most importantly, companies should utilize hybrid work over fully remote work modalities as much as possible, as a greater extent of remote work was found to be inversely correlated with all forms of promotion-focused crafting. Offering opportunities for younger employees to work in person with coworkers is especially important as it provides much-needed collaborative and on-the-job training experiences during the formative years of those entering the workforce (Emanuel et al., 2023).

Organizations and individuals can use the strategies described in this chapter to encourage gain cycles through promotion-focused job crafting. By providing adequate remote work resources and addressing remote work demands, employers create the optimal work characteristics for expansion-oriented behaviors, which build additional resources and motivation to continue crafting. This study also provides insight into helping individuals break out of costly loss spirals. Remote workers, especially those in younger age groups, tend to resort to reducing their work boundaries and responsibilities to compensate for overwhelming work demands. These efforts are often unsuccessful, resulting in lost resources and lower motivation, leading to further reduction-oriented behaviors.

Based on the findings of this study and prior job crafting research (Lichtenthaler & Fischbach, 2019), a three-step solution is recommended for mitigating loss spirals. First, managers must be trained to recognize the symptoms of loss spirals in their direct reports and understand that they may not be manifestations of “laziness” but rather defensive strategies to counteract imbalances between work resources and demands. Second, and most importantly, managers should allow and even facilitate the short-term role reduction-oriented outcomes of prevention-focused job crafting behaviors. While this may seem counterintuitive, a temporary
reduction of work boundaries will grant the struggling employee a necessary reprieve from stress, thereby preventing burnout (Schaufeli et al., 2009). The perceived success of prevention-focused job crafting behaviors will help ameliorate adverse effects, such as increased cynicism and decreased engagement, thus slowing the loss spiral (Lichtenthaler & Fischbach, 2019; van Wingerden, Bakker et al., 2017b). Third, conversations between the manager and the affected employee must be held to identify and reduce unneeded demands while providing resources to buffer unavoidable demands. Having adequate resources, the employee can begin returning their work boundaries to baseline. Employees should be trained to capitalize on gain cycles by investing their resources in promotion-focused job crafting behaviors to avoid relapses into loss cycles and ensure long-term growth.

While organizations can create the optimal environment and train productive job crafting strategies, job crafting is, at its roots, a proactive behavior, and the onus thus falls on the individual to effectively craft their job boundaries. Setting concrete job crafting goals helps measure the impact of job crafting behaviors and focuses the investment of resources into the most productive activities towards reaching expected outcomes. As is evident from research on loss cycles, overwhelmed employees continue to engage in prevention-focused job crafting in hopes of reducing their demands even though there is often little or no impact on actual reduction in their responsibilities. By setting a concrete goal, such as reducing the number of overtime hours, struggling employees will be better able to test different job crafting strategies and evaluate their effectiveness.

Due to the increased distance from their peers and organizations, communication about job crafting activities is crucial for remote and hybrid workers. As most jobs today require some degree of task interdependence, others often see unannounced boundary expansion or reduction
behaviors as dysfunctional (Dierdorff & Jensen, 2018), leading to increased social isolation. For
example, an individual who unexpectedly takes on tasks outside of their domain may trigger
confusion and hostility from coworkers who feel that the individual is “stepping on their toes.”
However, if the job crafter first expresses their goal of learning new skills, the same coworkers
would feel less threatened and may even offer to coach the crafter on the skills they want to
build. Communication is especially important in curtailing unproductive prevention-focused job
crafting behaviors, as these are frequently misattributed to negative personal characteristics
instead of the underlying cause. A remote worker may be perceived as unengaged because they
are muted and have their camera off during meetings. However, if the worker conveys
beforehand that they live in a loud household without a private space to work, the organization
may be able to offer a shared-workplace stipend before the individual needs to resort to
prevention-focused job crafting behaviors. Thus, by setting concrete goals and maintaining clear
communication lines, employees will synergize their job crafting activities with their
organizations and peers towards shared positive outcomes.

Chapter 8: Limitations and Future Directions

As with all research, this study has several limitations. In this section, I acknowledge the
limitations, discuss why they are appropriate trade-offs given the context of the dissertation, and
provide directions for future studies. First, the cross-sectional design of this study cannot
establish temporal precedence between IVs, DV, and mediators. As such, even if all hypotheses
were confirmed, it cannot be conclusively determined whether remote work demands, resources,
job crafting, and work engagement are antecedents or outcomes of each other. As discussed in
Chapter 3, prior research on gain cycles and loss spirals suggests that the variables are likely
both antecedents and outcomes (Bakker & Demerouti, 2017; Lichtenthaler & Fischbach, 2019).
Consequently, I contend that examining the valence and strength of relationships between the variables is more important than temporal precedence in the exploratory context of this study, as they are all recurring components in their respective cycles.

Second, coupled with an inability to establish temporal precedence, the non-experimental design of this study precludes claims of causality. A longitudinal study with experimental and control groups would provide substantive evidence on whether remote work resources and demands cause the emergence of job crafting behaviors and work outcomes. However, there are solid ethical concerns with taking this approach, as high demands and low resources are linked to stress and ill health (Schaufeli & Bakker, 2004). Therefore, serious consideration needs to be taken to weigh potentially valuable casual findings to be gained through manipulating work demands and resources over long periods against possible health risks faced by participants.

Finally, while I account for some of the effects of common method biases by randomizing the order in which sub-sections and items in the survey are presented, it must be acknowledged that all of the response sets are self-report Likert-type scales (Podsakoff et al., 2003). One limitation of self-report, especially concerning prevention-focused job crafting, is the issue of socially desirable responses. Many behaviors encompassed by prevention-focused job crafting may be considered counterproductive or something a “lazy” worker might do. Tims, Bakker, and Derks (2013) reported that participants seldom self-reported undertaking prevention-focused job crafting behaviors, leading to difficulties in determining the relationships between these behaviors and associated outcomes. Direct observations or collecting 360° reports on job crafting behaviors would help address these issues. However, the increased distance between remote workers (Leonardi et al., 2010) may make it difficult for researchers, supervisors, and coworkers to observe and accurately rate the frequency of job crafting.
behaviors. Indeed, even Gordon et al.'s (2018) job crafting intervention study amongst close-knit healthcare professionals required self-report surveys on top of objective performance measures to measure job crafting behaviors.

Considering the current study's limitations, three main pathways emerge to build upon the research findings. First, the theoretical model should be investigated longitudinally in a single organization or department. This approach will help ameliorate potential confounds brought about by differences between organizations and potentially provide more robust support for gain cycles and loss spirals. Second, with the support of management, promotion-focused job crafting interventions can be examined using quasi-experimental methods to determine causal relationships between job crafting behaviors and work engagement amongst remote workers. Recent reviews of job crafting interventions have found ample evidence of the effectiveness of such interventions in traditional working populations (Chen, 2022a; Donaldson et al., 2021; Mukherjee & Dhar, 2022). Finally, with the recent developments in career crafting (Lee et al., 2021), an extension of job crafting to encompass multiple jobs across a person’s life, prolific opportunities exist to test this new crafting evolution on the hybrid and remote working populations.

Chapter 9: Conclusion

With nearly a third of employed individuals engaged in some form of remote work in North America alone (Barrero et al., 2021; StatCan, 2021), and many industry-leading companies predicting this number to rise to 70% in the near future (Crummenerl et al., 2022), remote and hybrid work arrangements may soon subsume traditional in-person arrangements as the predominant work modality. As organizations transform operating models and job designs to adapt to these new ways of working, it is important to avoid neglecting employee-driven
adaptive strategies such as job crafting (Kniffin et al., 2021). Beyond addressing the decreasing trend in work engagement amongst workers (Harter, 2023), understanding how remote work resources and demands are related to productive types of job crafting helps organizations and individuals develop solutions to the myriad of challenges inherent in the future of work. For example, 23% of entry-level jobs are at high risk of being automated, coinciding with the World Economic Forum’s estimation that a billion people worldwide must be upskilled by 2030 to remain employable (Crummenerl et al., 2022). On an organizational level, insights from this dissertation may aid managers in identifying the optimal remote work characteristics to motivate promotion-focused job crafting behaviors such as expanding one’s skill and task boundaries in response to the upskilling crisis.

With the rise of the gig economy and fluid workers, “a growing share of the American workforce is no longer employed in ‘jobs’ with a long-term connection with a company, a job ladder, and mutual interest in the well-being of both the company and the worker” (Friedman, 2014, p. 171). Fluid workers often have drastically different career goals and work experiences compared to full-time employees in the same company (Paolini et al., 2020). The importance of job crafting for this emerging segment of workers is magnified as the onus of responsibility falls solely on the workers themselves to ensure their well-being. Frequently segregated from the rest of the organization, fluid workers tend to have fewer resources, access to internal peer networks, and developmental opportunities than their employee counterparts. Thus, on both individual and organizational levels, the findings from this study provide critical insight in helping this emerging type of remote worker ensure that the most favorable environment exists to job craft towards higher engagement and other aspects of well-being.
Appendix A: Measures


Work scheduling autonomy
1. The job allows me to make my own decisions about how to schedule my work.

Decision-making autonomy
2. The job allows me to make a lot of decisions on my own.

Work methods autonomy
3. The job gives me considerable opportunity for independence and freedom in how I do the work.

A2. Work Design Questionnaire – Social Support (Morgeson & Humphrey, 2006)

1. I have the opportunity to develop close friendships in my job.
2. I have the chance in my job to get to know other people.
3. My supervisor is concerned about the welfare of the people that work for him/her.
4. People I work with are friendly.


1. My organization fails to appreciate any extra effort from me (R)
2. My organization really cares about my well-being
3. My organization shows very little concern for me (R)
4. My organization takes pride in my accomplishments at work
5. Even if I did the best job possible, my organization would fail to notice (R)
6. My organization cares about my general satisfaction at work
7. The organization tries to make my job as interesting as possible
8. The organization is willing to extend itself in order to help me perform my job to the best of my ability


1. The work activities themselves provide direct and clear information about the effectiveness of my job performance.*

2. Other people in the organization, such as managers and coworkers, provide information about the effectiveness of my job performance.*

3. I receive feedback on my performance from other people in my organization (such as my manager or coworkers)

*Indicates “(e.g. quality and quantity)” removed from item wording for conciseness and easier comprehension

**A5. Work-Family Conflict Scale** (Netemeyer et al., 1996)

1. The demands of my work interfere with my home and personal life.*

2. The amount of time my job takes up makes it difficult to fulfill personal responsibilities.*

3. Things I want to do at home do not get done because of the demands my job puts on me.

4. My job produces strain that makes it difficult to fulfill personal duties.*

5. Due to work-related duties, I have to make changes to my plans for personal activities.*

*Indicates “family” changed to “personal” in item wording.

**A6. Professional Isolation Scale** (T. D. Golden et al., 2008)

1. I feel left out on activities and meetings that could enhance my career
2. I miss out on opportunities to be mentored
3. I feel out of the loop
4. I miss face-to-face contact with coworkers
5. I miss the emotional support of coworkers
6. I miss informal interaction with others

A7. Techno-overload Scale (Ragu-Nathan et al., 2008)
1. I am forced by technology to do more work than I can handle
2. I am forced by technology to work with very tight time schedules
3. I am forced to change my work habits to adapt to new technologies
4. I have a higher workload because of increased technology complexity

A8. Role Ambiguity Scale (Bowling et al., 2017)
1. The requirements of my job aren’t always clear.
2. I often don’t know what is expected of me at work.
3. My job duties are clearly defined. (R)
4. I know what I am required to do for every aspect of my job. (R)

A9. Job Crafting Questionnaire (Bindl et al., 2019)

Promotion-oriented relationship crafting
1. I actively sought to meet new people at work.
2. I made efforts to get to know other people at work better.
3. I tried to spend more time with a wide variety of people at work.

Prevention-oriented relationship crafting
4. I tried to minimize my interactions with people at work that I did not get along with.
5. I sought to change my work so that I only interacted with people that I felt good about working with.

6. I tried to avoid situations at work where I had to meet new people.

   **Promotion-oriented skill crafting**

7. I actively tried to develop wider capabilities in my job.

8. I actively tried to explore new skills to do my overall job.

9. I sought out opportunities for extending my overall skills at work.

   **Prevention-oriented skill crafting***

10. I sought to maintain my current skills over learning new skills at work. (*I channeled my efforts at work towards maintaining a specific area of expertise.*)

11. I tried to develop only the core skills needed to do my job. (*I sought to develop those skills in my job that helped prevent negative work outcomes.*)

12. I tried to avoid taking on work that required learning new skills. (*I made sure I stayed on top of knowledge in core areas of my job.*)

   **Promotion-oriented task crafting**

13. I actively tried to take on more tasks in my work.

14. I sought to change my tasks so that they were more challenging.

15. I tried to increase the number of difficult decisions I made in my work.

   **Prevention-oriented task crafting**

16. I actively tried to reduce the scope of tasks I worked on.

17. I tried to simplify some of the tasks that I worked on.

18. I sought to make some of my work mentally less intense.

   **Promotion-oriented cognitive crafting**
19. I tried to think about how my job contributed to the organization’s goals.

20. I tried to think about new ways of viewing my overall job.

21. I tried to think about ways in which my job as a whole contributed to society.

*Original items italicized and in parentheses.

**A10. Utrecht Work Engagement Scale** (Schaufeli et al., 2006)

1. At my work, I feel bursting with energy.

2. At my job, I feel strong and vigorous.

3. I am enthusiastic about my job.

4. My job inspires me.

5. When I get up in the morning, I feel like working.*

6. I feel happy when I am working intensely.

7. I am proud of the work that I do.

8. I am immersed in my work.

9. I get carried away when I am working.

*Note: Item adapted from original version: “When I get up in the morning, I feel like going to work” to fit the remote work context.
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111


