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The Hidden Side of Work-Family Boundary Management: Uncovering the Role of Cognitive Boundary Work and Boundary Context

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THE HIDDEN SIDE OF WORK-FAMILY BOUNDARY MANAGEMENT: UNCOVERING THE ROLE OF COGNITIVE BOUNDARY WORK AND BOUNDARY CONTEXT

by

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ABSTRACT

Work-family life is becoming increasingly complex for the modern-day working parent, making boundaries that define the physical, temporal, and psychological aspects of work and family domains evermore important in how people choose to structure and manage the interface. However, the literature on boundary management has predominantly studied the enactment of certain boundaries and treated these boundary constructs as stable (e.g., general preferences and tendencies to behaviourally integrate or segment work and family). This research has also largely been conducted in contexts where the environment naturally created a way to organize the interface without the employees having to do as much deliberate structuring between these work and family roles (e.g., employees go between home and working on-site in a central workplace). As such, in my dissertation research I sought to understand how remote working parents engage in a self-directed practice of constructing and changing their boundaries. To do so, I first take an inductive approach to explore the experiences of remote working parents who had to undertake the full-time care of their children during the COVID-19 pandemic. Using a grounded theory approach to analyze two samples of qualitative data (i.e., Reddit posts; online survey with open ended questions), I uncover the cognitive nature of boundary work that encompasses the mental efforts applied to the anticipation of boundary needs, boundary planning, regulation of boundary implementation, and the subsequent adaption of boundaries. Further, I unpack the factors that are intertwined in cultivating a "boundary context" in which individual's boundary work is fundamentally rooted in. I find that one's boundary work is contingent on key family and organizational members as well as broader social roles that prescribe expectations around domain membership and thus their work-family boundaries. Subsequently, I develop the cognitive boundary work construct further by quantitatively testing the core elements of the

proposed cognitive boundary work process as well as exploring a new set of hypothesized relationships. I use a multi-study approach to create and validate a self-report instrument to measure cognitive boundary work by beginning to test the items and establish the psychometric properties and validity of the subscales in a sample of remote working parents (Study 2 and 3). Then with a cross-sectional (Study 3) and a repeated measures design (Study 4), I began testing the proposed correlates of cognitive boundary work and building the nomological net of this construct. Of note, the final study allowed me to examine the dynamic nature of cognitive boundary work that I observed in the qualitative data, in which I found episodic fluctuations of cognitive boundary work were positively related to the hypothesized outcomes in a given week. Altogether, my dissertation builds and tests new theory on a process of boundary work that elaborates on how this unfolds through multiple cognitive stages while also accounting for the boundary context. This will consequently serve to provide important theoretical and practical implications regarding work-family boundary management.

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DEDICATION

For Shelby.

A brilliant, strong, and generous person whose life and legacy continues to be my guiding light. She was a friend in the deepest sense of the word—who foresaw and brought out the best and bravest version of me. It is because of her steadfast belief and support that I have become the person that I am today. In finding such extraordinary friendship, I know that I am one of the lucky ones.

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CHAPTER 1

Introduction

As work and nonwork life have unequivocally been moving toward a more intertwined existence in recent years, employees nowadays must navigate more fluidity and ambiguity between these domains. This means that the nature and management of *boundaries* or *borders*—i.e., delineating a domain's physical, temporal, and psychological scope—inherently at the interface of work and family are changing as well. This is largely a result of major demographic shifts (e.g., prevalence of dual-earning parents; Catalyst, 2020) and the rise of technology that connects people on-demand to their various life domains (e.g., via the internet and smartphones; Ren et al., 2021), as people have unprecedented options for where, when, or how their work and family roles can be carried out (Kossek, 2016). Contemporary employees are consequently spending more time working remotely and/or outside traditional "business hours" (i.e., the "9-5"'; Beckman & Mazmanian, 2020), where for instance, they respond to job-related emails on evenings and weekends (Derks et al., 2014, 2016). In addition to the different times and places work- and family-relevant behaviours are being performed, people in the modern workforce are more often straddling dual expectations of distinct domains by overlapping their work and family roles to fulfill their collective responsibilities. For employees who work from home, they now report double the amount of time they spend multitasking job and family duties than those surveyed a decade ago (Schieman et al., 2021). As such, it is critical to more fully understand individuals' experiences with creating and managing boundary structures, which are increasingly important for people to effectively organize and balance their work-family needs (Clark, 2000).

To understand how boundaries between work and family are put in place, I look to the literature on boundary dynamics. Extant research has generated a breadth of knowledge on

individuals' use of boundaries, which is typically conceptualized according to Ashforth and colleagues' (2000) framework as a person's preferences or behaviours for a boundary management strategy that generally falls along the integration-segmentation continuum (see a review by Allen et al., 2014). Many studies have since demonstrated that integration—which is marked by thinner lines between work and nonwork—tends to enable a sense of balance and relates to increased perceptions of work-family conflict but also enrichment (e.g., Illies et al., 2009). By contrast, segmentation keeps work and nonwork separate and minimizes perceived positive and negative spillover (e.g., Kinman & Jones, 2008; Olson-Buchanan & Boswell, 2006). Beyond the interrole consequences stemming from integrated or segmented roles, theories and research have also explored how individuals' attitudes towards their domain membership (e.g., role salience; Knapp et al., 2013; Winkel & Clayton, 2010) and external factors shape may shape the boundary management strategy they implement (e.g., Bulger et al., 2007; Kossek et al., 2006; Kreiner et al., 2009). Altogether, placing a spotlight on these overarching boundary preference and management strategies has enabled scholars to take a variable-centered approach to identify the key correlates of work-family integration-segmentation, addressing such questions as which individual and contextual characteristics lead people to integrate or segment their work and family lives and how this ultimately relates to individual outcomes.

However, the dominance of this boundary management paradigm that has mostly focused on individual differences (e.g., preferences) and behaviours associated with enacting an integrated or segmented approach has obscured other parts of individuals' boundary-laden experiences that may also be important for understanding how work-family boundaries are realized in-situ. In particular, the boundary literature has neglected (a) the possibility that people may use a combination of integration and segmentation given the more granular needs of

different work and family tasks, and (b) the efforts involved in boundary work itself, that is, efforts to construct, control, and change these boundaries that demark one's roles (Ashforth et al., 2000). Therefore, this has obscured the *cognitive* side of boundary work that likely surrounds and underlies the actual practice of implementing boundaries. To illustrate, a person may monitor work emails while cooking dinner (integration) but chooses not to do so while eating dinner with their family (segmentation). This is just one example of implementing or enacting boundaries as a nuanced combination of integration and segmentation. What is more, underlying such boundary implementation is this person's cognitive efforts to assess whether dinner time needs stronger boundaries than cooking (i.e., so not to blend with the work role), planning one's schedule to integrate or segment these different activities accordingly, regulating one's attention between cooking and monitoring work emails while minimizing work-related distractions during dinner, and possibly modifying such a boundary structure on a continual basis and in response to any ongoing challenges.

Hence, I contend that effectively implementing these structures (i.e., "placing" and "transcending" boundaries; Voydanoff, 2005) is implausible without the mental work that happens before (e.g., appraisals and decision-making), during (e.g., regulation), and after (e.g., adaptations) boundaries are enacted. Though, this remains in a black box in the overall *process* of boundary work, which has made it difficult to explain why people ultimately choose to construct or change their boundaries in a certain way and the potential challenges associated with this ongoing boundary work. For instance, how individuals' boundary-laden thought processes might be influenced by the broader context they are embedded in. To be sure, this shifts the focus to gain a deeper understanding of how and why people do boundary work, regardless of the resulting configuration of one's boundaries (i.e., where they may fall on the integration-

segmentation continuum). Accordingly, the aim of my dissertation research is to explore the cognitive processes inherent to constructing and changing work-family boundaries.

To address this overarching objective in my dissertation package, in Chapter 2 I provide a more in-depth discussion of this extant literature on boundary management as well as further explain the theoretical motivations underlying my dissertation research. Subsequently, to address my research question empirically, in Chapter 3 I first took an inductive approach and collected two sources of qualitative data from remote working parents to understand more about their specific thought processes pertaining to how they construct and change their boundaries. More specifically, I focused on parents who were working from home with non-adult children present during the COVID-19 pandemic. These employees endured the co-existence of work and family under the same roof (i.e., a blended environment) as well as an increase in essential family-related responsibilities (e.g., childcare), which gave rise to a sustained and discernible reliance on boundaries to effectively navigate and perform necessary work-family obligations. Despite being a specific context, this can help to reveal new insights about a phenomenon and is helpful for teasing apart previously concealed processes (Arnould et al., 2006; Pratt et al., 2006) which is particularly valuable for building a more nuanced understanding and theory of individuals' boundary-laden experiences (e.g., Kreiner et al., 2009; Stanko & Beckman, 2015). Exploring the salient pandemic experiences of this subset of the population therefore offered a unique opportunity to study a theoretically rich context in which the swift and critical departure from the way these working parents would typically navigate the work-nonwork interface compelled them to engage in a more explicit and deliberate practice of boundary work.

Consequently, the findings of Study 1 suggested that remote working parents used their agency to construct, control, and change boundaries vis-à-vis *cognitive boundary work*. I

observed how individuals exerted mental energy to appraise the boundaries inherently needed to perform upcoming work-family tasks and make plans to structure boundaries accordingly ("pre-enactment"), implement and monitor adherence to intended boundaries ("enactment"), and learn from boundary-laden experiences to adjust subsequent boundaries ("post-enactment"). I also found that the necessity and amount of effort spent engaging in cognitive boundary work was intricately connected to one's *boundary context*, such that the discretion of key family and organizational members as well as broader social role prescriptions dictated acceptance of an individual's intended boundaries. To inform the connections between these higher-level themes, I incorporated insights from extant research on cognitive and motivated aspects of the work-family interface (e.g., Daminger, 2019; Hirschi et al., 2019), and layered on action regulation theory (i.e., how people regulate their goal-directed behaviours through cognitive processes; Zacher, 2017) as an overarching framework. Altogether, this served as the foundation to build new theory on individual boundary work as a thoughtful, motivated, and dynamic *process*.

To further address my research question in Chapter 4, I aimed to establish the cognitive boundary work construct and demonstrate it as an important aspect of individuals' work-family boundary management. To do so, I initially developed hypotheses to map out the nomological net of cognitive boundary work based on a combination of insights from the qualitative findings and process model as well as by again drawing on the extant literature and the tenets of an action regulation perspective (Zacher, 2017). I hypothesized a set of predictors that may shape one's motivation and capacity for engagement in cognitive boundary work, and then, explored the possible consequences of cognitive boundary work for individuals' needs and work-family goals. In order to test the proposed relationships, I first had to undergo a process of developing and validating a self-report measurement tool to quantitatively test the structure of the cognitive

boundary work construct and its relationships with key correlates. Using two cross-sectional studies (Study 2 and 3) I explore and confirm the psychometric properties of the scale as well as the discriminant validity of cognitive boundary work construct in relation to existing boundary scales. Subsequently, in Studies 3 (cross-sectional) and 4 (a weekly diary study), I found support for many of the hypothesized antecedents of cognitive boundary work, including proactive personality, whole life perspective, work-family demands and demands that are more essential (via age of children), and gender. Further, the results suggest that cognitive boundary work serves as an important path to helping people articulate and address important work-family goals, as this was positively related to work-life balance effectiveness, job and family performance, and overall well-being. Altogether, the findings across both inductive and deductive phases of this dissertation underscore the value of investigating the cognitive stages of boundary work.

Finally, my dissertation concludes with a general discussion in Chapter 5. To summarize here, my dissertation research proposes to theoretically advance the study of work-family boundary management in several ways. First, I shed new light on the cognitive stages of boundary work—i.e., anticipating boundary needs, boundary planning, regulating boundary implementation, and boundary adaptation—which provides novel explanation for *how* and *why* people construct, control, and change their boundaries. As such, I expand the knowledge of boundary management concentrated on stable individual characteristics and behaviours to include a broader scope of individuals' experiences with respect to their more dynamic thought processes occurring before, during, and after the enactment of any boundaries. Second, I unpack the various ways in which an individual's boundary work can be tied to their embedment in the overall boundary context, as work and family domain membership as well as social systems meaningfully intersect to influence individual's motivation for and options in doing boundary

work. Importantly, I explicate how the interplay of discretionary boundary acceptance from these external sources is crucial to understand individuals' decision-making about their boundaries and the challenges they face in work-family management. Finally, across my dissertation package I triangulate support for the new cognitive boundary work construct using multiple qualitative and quantitative samples. Notably, I also tested the relationships with several predictors and outcomes based on an action regulation framework—an important new theoretical integration for boundary scholarship. Developing and validating this scale also has important implications for boundary management research as it can be used by other scholars to empirically test these understudied aspects of boundary work in the future.

CHAPTER 2

Theoretical Background

Summary of Key Theories

Boundary theorists share an overarching goal to explain how people navigate the intricate relationships between work and family (Allen et al., 2014), in which the effective use of boundaries can be considered a linchpin for successful management of the work-nonwork interface. Built upon formative boundary research (e.g., Nippert-Eng, 1996), these theoretical frameworks similarly define *boundaries* as "acting as a perimeter around a role" (Ashforth et al., 2000) or *borders* "delineating a domain's scope" (Clark, 2000), and are treated here as interchangeable terms. At their core, boundaries are socially constructed features of the interface that allow individuals to understand and organize their distinct work and nonwork domains and do so in a way that makes sense for increasing overall functioning (Lamont & Molnar, 2002). Boundaries therefore indicate what is normative for each domain and what is acceptable for the relationships between different domains (e.g., whether one's participation in one domain can overlap with one's participation in another). According to Clark (2000), borders can by nature be *physical/spatial* (i.e., where domain-relevant action takes place), *temporal* (i.e., when domain-relevant action takes place), or *psychological* (i.e., how domain-relevant action—overt and covert—takes place vis-à-vis implicit rules dictating appropriate internal and external states). These specific types of borders facilitate clarity around the respective spaces, times, and thought, emotional, or behavioural patterns of work and family, which may or may not be allowed to intersect. For instance, enacting a strict temporal work boundary for many employees means showing up to an office for job-related activities from 9am-5pm, Monday to Friday.

Ashforth and colleagues' (2000) boundary theory emphasizes the structure of individuals' enacted boundaries as a function of overall role integration or segmentation. With their basis in role identity theory (Katz & Kahn, 1978) and focus on micro transitions between roles, this means trying to minimize the degree to which people have to exit the work domain and enter the family domain (or vice versa), as this compels a meaningful shift in the prescriptions associated with each distinct role. Therefore, where a person falls on the integration-segmentation continuum is expected to be indicative of one's tendency for movement across boundaries and the propensity for increased blurring between roles that can be difficult to manage.

Further, roles can either be integrated or segmented depending on the nature of their own boundaries and those of adjacent domains. Following Hall and Richter (1988), Clark's (2000) border theory focuses on explicating how the strength of role boundaries can vary according to two core characteristics. Namely, a combination of *flexibility* (i.e., the level of rigidity around where/when/how domain-relevant action is expected to occur) and *permeability* (i.e., the extent that elements from one domain are allowed to enter or overlap with another domain). Taken together, these attributes have since been discussed and studied to reveal where a given pair of roles are likely to fall on the integration-segmentation continuum (e.g., Clark, 2002; Winkel & Clayton, 2010). That is, weaker/thinner borders that are characterized by more flexibility and permeability should result in role integration, whereas stronger/thicker borders characterized by inflexibility and impermeability are likely to result in role segmentation (Ashforth et al., 2000). To provide an illustrative example for the enactment of more integrated boundary management, this may involve a strategy that accepts making family-related calls in the workplace as well as spending time thinking about job-related tasks at home during off-work hours.

While role integration-segmentation depends on what is expected in the related roles (i.e., where and when someone is required to work), Ashforth et al. (2000) expected that people engage in boundary work "to construct or modify the temporal, spatial and other boundaries that demark roles" as a way "to foster either greater integration or segmentation" (p. 482). In spite of theory acknowledging this aspect of the phenomenon, boundary scholarship has not fully investigated what boundary work involves or how people actively construct or change their boundaries. Rather, the majority of research on work-family boundaries has emphasized individuals' general preferences or behaviours related to the overall enactment of work-family role integration or segmentation, including that of behavioural boundary work "tactics" (i.e., Kreiner et al., 2009). In doing so, this literature does not comprehensively speak to individuals' efforts involved in executing boundary work itself (Allen et al., 2014). Yet, this is important knowledge for us to unpack in order to understand *how* and *why* individuals ultimately integrate or segment work and family, and potentially switch between overlapping and separating roles. Moreover, identifying these other manifestations of boundary management beyond stable preferences and behaviours can help to illuminate qualitative differences in the experiences of a large proportion of employees who appear to be ostensibly similar "boundary managers" (i.e., the majority who fall on the middle of the continuum via scale responses; Bulger et al., 2007).

Thus, in the rest of this chapter, I provide a more detailed overview on the current state of literature on boundary management. Specifically, I review research theorizing and/or empirically examining the consequences and antecedents of work-family integration-segmentation. Finally, I conclude by presenting the theoretical motivations that guide my dissertation research.

Literature Review

Consequences of Integration-Segmentation

Ashforth et al.'s (2000) boundary theory has since stimulated a burgeoning area of research captured under the larger umbrella of "boundary management". Accordingly, integration and segmentation have been used to categorize the style or strategy individuals generally enact to structure the relationship between work and nonwork domains. Given that integration-segmentation has been viewed as a means to evoke more effective management of the work-family interface, the bulk of studies have focused on the consequences of these boundary management variables in terms of how they affect spillover processes and interrole outcomes. Overall, weaker boundaries or integrated domains have been related to higher work-family conflict and/or enrichment (e.g., Chen et al., 2009; Olson-Buchanan & Boswell, 2006; Qiu & Fan, 2015; Wepfer et al., 2018), whereas stronger boundaries that are meant to segment roles have been associated with lower work-family conflict but at the same time lower enrichment (e.g., Kinman & Jones, 2008; Park & Jex, 2011). Gabriel et al. (2020) also found that episodes of fully integrating family into work could induce both negative and positive affect, which in turn influenced interrole conflict and enrichment paths, respectively. In addition, some scholars have begun to focus on integration via one particular type of border; for example, Junker et al. (2020) demonstrated that psychological forms of integration can manifest in different ways (e.g., via affective rumination about work in the family domain) and have differential consequences for positive and negative spillover. Based on this accumulation of findings, both integration and segmentation are now better understood as being a double-edged sword for interrole relationships (e.g., Bulger et al., 2007; Paustian-Underdahl et al., 2013) with respect to the trade-offs they offer for perceived work-family conflict and enrichment.

As mentioned, the study of boundary management has conceptualized and operationalized integration and segmentation both as preferences (i.e., what people innately want

their boundaries to look like) and behaviours (i.e., the boundaries they ultimately end up having in place). Since Powell and Greenhaus (2010) drew special attention to this distinction in their measurement of integration-segmentation, this has become an important point of clarification and one that can show the potential gap between one's inherent boundary preferences and their resulting boundaries. Although these conceptualizations differ in terms of the boundaries that are desired versus actually enacted in a certain way, the measures being used often still confound the two (i.e., using a combination of items such as "I prefer to…" and "I do…" ; Kossek et al., 2006) and both approaches similarly emphasize the integration-segmentation continuum. To that end, noteworthy findings from Kreiner and colleagues' (2009) interviews with Episcopalian priests described numerous boundary work "tactics" that are used to facilitate an individual's more ideal boundary management strategy, which can also be a function of the environmental constraints that interact with an individual's preferred level of work-family integration or segmentation. For example, whether or not people allow family objects or reminders such as photographs or calendars into the workplace could be part of their larger strategy to maintain separation or integration by respectively limiting or allowing referencing of unrelated roles (Nippert-Eng, 1996). In spite of this research trying to further identify how boundary work is done in practice, this reinforces how a spotlight has been placed on the enactment of a particular boundary strategy as the seeming end goal (i.e., whether desired integration or segmentation is achieved) and which has collectively cast a shadow on the subtleties of boundary work (e.g., how and why boundaries are actualized).

Individual Determinants of Integration-Segmentation

A goal of empirical studies that have followed Clark (2000) has been to explore potential antecedents of border strength in order to address why an individual might choose to be flexible

and permeable or integrate versus segment, and whether border strength is (a)symmetrical across work and family domains (Matthews et al., 2010). Based on the perspectives that have guided this research such as the theoretical propositions (e.g., centrality of domain membership) and early manifestations of boundary management variables as intrinsic preference for integration or segmentation, the emphasis has mostly been placed on examining individual differences. In particular, individuals' greater identification with a specific domain or the salience of that role in a person's life has been shown to positively relate to stronger boundaries—i.e., segmentation—being preferred around that role as well as more likely to protect them in practice (e.g., Capitano et al., 2017; Capitano & Greenhaus, 2018). Thus, this area of research has largely focused on individual attitudes and values as driving these border characteristics and management strategies.

Taking these insights together, Bulger et al. (2007) and Kossek et al. (2012) took a person-centric approach to understand how a combination of such factors contribute to the most common clusters of "boundary managers"; in a qualitative study of employees at a Fortune 500 company, Ammons (2013) also identified similar distinguishing factors in several profiles. Notably, across these studies, people differed according to whether they intended and/or attempted to protect the boundaries of one or both domains as well as the capacity they had to do so. For instance, being a "family protector" meant having stronger boundaries around this domain and weaker boundaries around work—family could permeate work but not the other way around. Though, beyond these more stable factors, the literature still has a limited understanding of other contributing elements that are more fluid or aspects of the decision-making process that lead people to create and manage boundaries in a particular way in everyday life.

External Determinants of Integration-Segmentation

Due to the probable gap for most people in what is preferred and what is possible with respect to their boundary management strategy, there is also a recognition in boundary scholarship that external factors can play a role in individuals' boundary-laden choices and behaviours. This perspective was present in Clark's (2000) theorizing that accounted for the influence of "border-keepers" (e.g., managers, team members; spouses, children) who were key members of the focal individual's central domain(s); similarly, Ashforth et al. (2000) discussed the potential impacts of such "role senders". Specifically, Clark explained that because roles are performed in organizations and families that include other people who have certain needs and expectations, these other domain members also contribute to border strength by constraining or facilitating the flexibility and permeability allowed for work or family. Consequently, scales developed by Matthews and Barnes-Farrell (2010) have distinguished between one's willingness to be flexible compared to their perceived ability to be. However, across many of these studies, the items do not expressly identify *who* restricts flexibility or *how* they do so (e.g., "I am able to arrive and depart from work when I want in order to meet my family and my personal life responsibilities"). Despite theorizing often implying there is a specific source limiting or enabling flexibility, empirical support for this can only be assumed with the current measures.

This is evident in the large body of research examining flexible work arrangements in organizations (Kossek & Michel, 2011), which in relation to boundary dynamics is most clearly defined as the degree of malleability allowed for spatial and temporal borders (i.e., where and when an employee must complete their work, respectively). In this case, both the availability of such family policies from the organization as well as the (un)accepted use of this practice from one's supervisor and perhaps even colleagues can impact individuals' boundary management. Further, some studies have indirectly tapped into this idea by demonstrating that individuals'

perceived control over their boundaries can vary—in theory suggesting that external factors are at play (Kossek et al., 2012). At the same time, others have adopted a fit perspective to compare segmentation "supplies" from the organization with one's "needs" (Kreiner, 2006; Powell & Greenhaus, 2010). Few empirical studies have truly taken an interactionist perspective however, such as by exploring the interplay of individual and contextual factors as determining boundary-laden behaviours (e.g., Shockley & Allen, 2010; Rothbard et al., 2005).

The impacts of other domain members have also been examined in terms of their capacity to violate an individual's intended boundaries at the point the person is trying to implement a particular integration-segmentation strategy. This means that there would be an unexpected and/or undesired interruption to their work (family) from the family (work) domain, in which the person may have to fully transition to the new role or be in limbo straddling both roles. As part of Kreiner and colleagues' (2009) aforementioned study of boundary work tactics, they also developed a conceptual model that accounted for the potential for violations of an individual's intended boundaries. For example, due to the close proximity of the church and where many priests or pastors live (i.e., accommodations provided to them like a clergy house), many priests would try to implement stricter separation by creating a physical divider (e.g., a fence), yet they would still have church staff and parishioners invading their nonwork spaces and time by showing up on their doorstep or calling their home phone during "off-work" hours. Violating the individual's preferred and/or intended boundary management strategy in such a way can result in unwanted role spanning or transitions that have been found in subsequent studies to obstruct one's ability to meet their work and family goals (e.g., Hunter et al., 2017) and can be associated with more work-family conflict (Carlson et al., 2015). In sum, this collection of studies suggests

that various contextual factors can affect individuals' boundary management by shaping the strength of their borders as well as by disrupting the boundaries people (want to) have in place.

Moreover, this research has tended to frame contextual factors as each exerting their isolated influence over individual's boundaries at a single or discrete point. Until recently, it was less clear how powerful other domain members could be in defining elements of an individual's domain and the strength of borders surrounding it on a continuous basis. Yet in their recent paper with navy sailors—whose overarching boundary structures are quite similar during deployment—Beckman and Stanko (2020) found that they all engage in some degree of "relational boundary work" with one's spouse and superior, which have a joint and inextricable influence on individuals' boundaries. More precisely, navy leaders had specific rules about what could or could not be shared with family members as well as when sailors were allowed to interact with family members while deployed. Couples were also characterized by sometimes fluctuating combination of cohesion (i.e., couple's level of togetherness or separateness) and adjustability (i.e., how they balance stability and change in boundaries).

In addition to individuals' boundaries being actively co-created with these other domain members, the consequences went beyond the boundaries that were allowed to be enacted (i.e., whether they were allowed to integrate, such as by making a family call). These more nuanced aspects of individuals experiences in creating and controlling boundaries in conjunction with other domain members allowed Beckman and Stanko to identify broader outcomes for couples' resilience and individuals' commitment to the organization. Consequently, the implications of this research cannot be understated, as it suggests the focus on an individual's boundary management preferences or behaviours do not alone predict what individuals' day-to-day boundary work looks like or their resulting work-family management experiences and outcomes.

One other interesting by-product of these findings was in showing that there is an ebb-and-flow of work and family driven restrictions on individual's boundaries as well as the use of integrative and segmented boundaries, helping to underscore boundary structures and options are never set in stone and boundary work is an ongoing consideration for contemporary employees.

Theoretical Motivations

The effective management of work-family relationships is undeniably contingent on one's boundaries—making boundary work the conduit to organizing and performing work and family tasks, particularly when there are inherent challenges and/or a lack of existing structures to do so. I subsequently summarize several key learnings that have been generated from this extant literature on boundary dynamics together with the potential areas of growth that will be addressed in this dissertation package. Then I will conclude this chapter by providing an overview of key theories and insights from different areas of work-family research that ultimately informed my qualitative findings as well as the hypotheses developed for the quantitative studies.

A superordinate objective of boundary research—stemming largely from the central motivation of Ashforth and colleagues' (2000) boundary theory—has been to determine what boundaries and boundary management strategies people adopt can reduce difficulties in navigating the relationship between work and family. Moving in lockstep toward this goal of understanding which role integration-segmentation strategy would be best for individuals' work-family management, boundary scholars have tended to pursue of one of two central questions. Namely, what predicts weaker-stronger boundaries overall and what are the consequences of the resulting boundaries as a function of integration-segmentation. The majority of studies have since focused on and found support for the proposition that the strength of a person's boundaries

are inversely related to the degree of interrole influence and spillover one reports perceiving. At the same time, studies have examined predictors that are expected to shape an individual's boundaries, for the most part taking an individual difference perspective or by examining the role of environmental influences. These border characteristics, individual preferences and attitudes related to domain membership have therefore been used to explain why someone may end up being more integrated or segmented. Relatedly, boundary theories and empirical studies have found the potential gaps between individual's desired and actualized boundaries stems from the degree of control people have over border flexibility as well as due to experiencing externally driven boundary violations. Altogether, this body of knowledge has generated valuable insights with respect to how people experience the connections between their work and family roles.

In spite of this, boundary scholarship has neglected to take a substantive interest in boundary work itself, and understanding of other potentially important parts of boundary-laden phenomenon have been more limited as a result. Boundary constructs have been conceptualized as either individual differences (i.e., preferences) or behaviours and albeit this has even been muddled at times, while also narrowly focused on the point which boundaries are enacted (e.g., roles being integrated or segmented). Further, these variables have tended to be operationalized with global measures that examine boundaries in the aggregate (Hecht & Allen, 2009); mainly as static variables that presumes roles and boundaries as well as the way they are managed remain mostly stable (Rothbard & Ollier-Malaterre, 2016). This has arguably been propelled by unexamined assumptions in the literature, such that people—due to their innate preferences—consistently use temporal, physical, and psychological borders in concert toward a single and unchanging goal: to integrate *or* segment work and family. Thus, researchers have tended to take a narrow focus and variable-centered approach to this phenomenon. That is, theorizing and

drawing conclusions about the advantages for people who segment and disadvantages for people who integrate (or vice versa), which ostensibly has the effect of pitting the two ends of the spectrum against each other.

I argue that there are at least two reasons why this exclusive focus can be insufficient. First, it is likely that contemporary employees are experiencing a hybrid configuration of weaker and stronger boundaries, which can serve as complementary approaches to fulfilling their work-family responsibilities.[1] That is, rather than having a single and unchanging goal about work-family relationships, people may want to integrate work and family at certain times but segment them at other times. This is because contemporary employees face new dynamic challenges with work-family management all the time (Allen & Martin, 2017; Allen et al., 2019; Beckman & Mazmanian, 2020) and there is well known fluctuation in individual needs, demands, and resources (e.g., Bakker & Demerouti, 2017; ten Brummelhuis & Bakker, 2012). As such, active boundary work that fosters a combination of integration and segmentation based on one's needs and goals may offer unique benefits. Evidencing that people are implausibly going to be singularly integrated or segmented, scholarly interest has recently picqued into a nascent area of research to understand work and family being simultaneously activated—what Clark (2000) called *blending*. Although this represents more extreme integration experiences, emerging studies suggest that blending more commonly occurs as specific episodes (versus an overarching strategy), where work and family are overlapped, however briefly, in an otherwise typical boundary structure.[2] These episodes could be construed as discrete instances of fully blending

[1] With the majority of people falling around the midpoint of boundary scales, this suggests their underlying experiences may be very different. Though, this is not possible to discern from scale responses alone.

[2] This creates a point of divergence from the focus and assumptions of Ashforth and colleagues' (2000) theory that presumed people fully transition between roles and thus tended to only perform one domain's task(s) at a time. This frames work and family as inherently separate entities, which follows from the "myth of separate worlds" that has since been debunked (e.g., Rothbard & Ollier-Malaterre, 2016). While this may have been more reflective of work-family experiences of the time (e.g., before employees could be reached via smartphone regardless of time and

(e.g., Gabriel et al., 2020) or manifest through a single type of border (e.g., psychological; Junker et al., 2020). In doing so, these studies have demonstrated that such experiences with integration can be simultaneously beneficial and challenging, highlighting what it is truly like to have these boundary-laden experiences. In sum, the ways that work-family boundaries have been studied may not fully reflect the nuances of individuals' experiences with boundary work or work-family management holistically.

Second, these scholarly blinders favouring overall integration-segmentation has resulted in a more limited understanding of the inner workings of boundary work. We know little about the essence of *doing* boundary work large in part because it was proposed that people only engage in boundary work to reach greater role integration or segmentation (Ashforth et al., 2000). Namely, the cognitive efforts and psychological processes underlying managing interrole relationships that tend to be concealed but actually contribute to the enactment of boundaries. Indeed, these seemingly invisible pieces of managing one's domains or the interface have recently been gaining attention in studies conducted under the broader work-family research umbrella. Notably, Daminger's (2019) work has inspired a necessary a shift from only considering the physical completion of tasks at the center of our understanding of family and household labour (e.g., going grocery shopping) by introducing a new perspective that recognizes the subtle but necessary, ongoing, and laborious thought processes taking place behind the curtain to oversee and execute each nonwork task. For example, the mental load involved in keeping track of food supplies and each family member's dietary restrictions or preferences, making shopping lists based on needs and budget, anticipating irregular needs such as birthday parties, etc. Furthermore, Hirschi et al., (2019) proposed action regulation strategies

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physical location), for the twenty-first century workforce this overlooks the many episodes where working parents are subject to multitasking *across* domains—behaviourally and/or psychologically.

for balancing interrole demands and resources as well as Powell and Greenhaus' (2006) articulation of decision-making processes specific to work-family suggest that individuals survey and assess decision alternatives prior to selecting a specific course of action for the interface.

As such, these peripheral ideas surrounding the role of cognition in other work-family phenomena may similarly apply to the ways in which people engage in boundary work, signifying there are important thought processes that underpin the behavioural implementation of boundaries. Particularly if people are indeed using a more complex combination of stronger and weaker boundaries according to certain periods of the day, week, or month, it is conceivable they give some thought to those decisions and intentionally put them in place. For instance, the appraisal of one's boundary-laden needs for work tasks may tell the person they have mandatory all-hands meetings every morning; this subsequently shapes the choice to implement stronger boundaries in the morning and balance this with weaker boundaries in the afternoon when they may have to oversee dual roles due to family task needs like picking up their children from school. What is more, there are some signs that people need to actively manage and use regulatory resources to effectively implement and maintain their intended boundaries (Allen & Kiburz, 2012; Sonnentag et al., 2010). Altogether this means that the underlying psychological processes involved in choosing to construct or change boundaries are ongoing and evolving.

As this also alludes to, there are salient external factors that can influence the decisions people make, and these cognitive processes may indicate how people reconcile such discrepancies between the boundary options they require versus what is actually available to them. This area of the literature still remains nascent with respect to pinpointing the exact manifestations and scope of contextual influences on individual's boundary work (i.e., who and how they do so specifically). This also extends to factors that were not considered by

foundational theories, such as societal level factors that shape prescriptions and proscriptions of membership in work and family domains (Eagly, 2013), and thus, who has access to the boundaries around and between them. Generating knowledge about these thought processes is consequently important for unpacking why and how boundaries are enacted in a particular way as well as for the standalone reason that this aspect of boundary work may involve a great deal of mental effort—a less well understood yet potentially crucial boundary-spanning demand.

An Action Regulation Approach to Work-Family Boundary Management

I draw on action regulation theory (Zacher, 2017) to make sense of and explain the cognitive processes underlying individuals' boundary work that I first observed in my qualitative findings in Chapter 3 (i.e., as part of the latter iterations of developing the process model found in Figure 2) and then subsequently use this framework to develop hypotheses for the quantitative studies in Chapter 4. Given the previous emphasis on behaviours associated with boundary implementation (i.e., to integrate or segment work and family), this provides a unified framework to understand the interplay with cognition and intersection of contextual factors that together have been largely absent from boundary management research (Allen et al., 2014). This theoretical perspective also aligns with the notion that people are motivated to engage in boundary work. Although the extant literature has long considered individuals' boundary-related preferences and attitudes as the driving force in boundaries ending up in a particular way, this theory helps to further understanding of boundary work—and constructing, controlling, and changing boundary structures—as serving a more proximal purpose in pursuit of broader work-family goals.

Action regulation theory is based on an overarching belief that people are motivated to act when they have goals they want to achieve (Frese et al., 2017). Accordingly, goals (i.e., any

desired state or ideal standard one wants to achieve can have a motivational influence; Locke & Latham, 1990) are achieved through action (i.e., including the smallest units of goal-directed behaviours; Hacker, 1985). The basis of the action regulation perspective is that people invest effort into various goal-directed actions that are based on hierarchically structured goals (Volpert, 1982), such that achieving smaller proximal goals can be a means of fostering attainment of larger and more distal goals. Applying this idea to boundary management, the effective implementation of boundaries would be a lower-order goal that helps people achieve higher-order work-family goals such as performing work and family roles successfully and attaining a sense of work-family balance. This sees people as playing an active role in shaping their own experiences and goals they pursue, in attempts to strategically optimize functioning across work and nonwork domains (de Bloom et al., 2020). As such, people with important work and family needs would be motivated to invest effort in boundary work.

Another key and relevant tenet of the action regulation perspective is that people regulate their goal-directed behaviours through cognitive processes (Zacher, 2017). Individual needs and abilities as well as potential constraints or barriers stemming from personal factors and/or their environment make up various input conditions that drive and contribute to these aspects of individuals' cognition. Explaining the linkages between behaviour and cognition as going hand-in-hand for goal pursuit, action regulation theories posit that people are more deliberate about identifying and pursuing their enduring work and family goals through an iterative process of appraisals, planning, monitoring, and feedback seeking and application (Frese & Zapf, 1994). Though, this process does not always occur in a rigid or linear fashion; people may skip or repeat steps as well as oscillate between the steps in a different sequence (e.g., develop a new plan for the same goal). Through this process, three different foci can be pertinent: a focus on tasks (e.g.,

analysis of task content, planning to complete tasks), the self (i.e., how individual factors may influence or be affected by their actions), and/or social context (i.e., the consideration of others and anticipated interactions with them). This provides a comprehensive way to understand and help reconcile how individuals think about their own needs and abilities in light of any challenges they face in addressing work-family role responsibilities via boundaries. Further, because action regulation is viewed as goal-directed *process* that incorporates engagement in these dynamic stages, management of the work-family interface can be viewed as an ongoing pursuit rather than as a means to an end. For these reasons, people would identify, pursue, and revise goals—and the associated actions—continuously rather than reaching a point and ceasing all goal-relevant thoughts and behaviours pertaining to boundaries in work-family management.

Taken together, the extant boundary management literature and related work-family research compel new insight into how people intentionally construct, control, and change their work-family boundaries. Hence, Clark's (2000) border theory offers primary theoretical grounding for this research and is ultimately integrated with the tenets of an action regulation theory (e.g., Zacher, 2017). In doing so, I elucidate how individuals' actual needs and external influences are accounted for in the cognitive and contextualized processes that are inherent to a person's ongoing practice of boundary work in work-family goal pursuit. This broadens the focus of boundary work and shifts into a process-orientated view of this phenomenon (versus as one fixed variable) as a dynamic and effortful practice captured in the phases occurring prior to, during, and after boundaries are implemented.

CHAPTER 3

Overview of Inductive Study

I first explored how and why people do boundary work in the context of parents working from home during the COVID-19 pandemic, and in particular to try to understand the cognitive processes inherent to constructing and changing their work-family boundaries. To do so, I collected two sources of qualitative data to triangulate my findings, first by scraping posts from online discussion boards (Sample 1A) and then gathering text responses from open-ended survey questions (Sample 1B). These complementary samples provided evidence of a range of individual experiences across occupations and organizations that were part of unprompted discussion in the broader population as well as more targeted questions to further unpack the patterns emerging from the online communities, respectively (Jonsen & Jehn, 2009). Overall, using an inductive approach was critical for unpacking the richness of individuals' experiences that deductive approaches sometimes cannot capture (Einola & Alvesson, 2021; Miles & Huberman, 1994). This also answers calls in the work-family literature to conduct more qualitative research to understand working parents' experiences at a deeper level (e.g., Eby et al., 2005) especially as they have become more complex for employees in the modern workforce.

Study 1 Method

Research Context

I focused on remote working parents of nonadult children because they tend to be the most time-pressured demographic group on average (e.g., Bianchi et al., 2006) and in this pandemic context their work and family boundaries shifted substantially.[3] As a result, this made

[3] The pandemic had numerous effects on people's lives and this is by no means exhaustive of all those impacts. For example, many people were facing challenges of continuing to provide eldercare, caring for sick loved ones, and dealing with grief, while millions of people also lost their jobs or a portion of their income due to the pandemic.

their experiences valuable for elucidating the more nuanced and typically unconscious processes associated with boundary work, which have remained largely overlooked (Allen et al., 2014). Declared a global pandemic in March 2020, Coronavirus ("COVID-19") and the vast societal-level interventions aimed at stopping the spread (e.g., "shelter-in-place", sweeping closures) disrupted normal social systems and provoked simultaneous changes to millions of individuals' work and family lives. In the nonwork domain, the closures of schools, daycares, and public spaces limited personal life activity options (e.g., no exercise classes) and increased many family role requirements by including some or all childcare and educational needs. This situation was marked by new restrictions to how people would typically manage their home environments and limited the conventional resources working parents may have previously relied on (e.g., babysitting, household services). In the work domain, there were widespread changes to employment status (e.g., furloughs, layoffs, temporary leave with pay) as well as the location of work (e.g., onsite, remote) and procedures (e.g., managing new safety concerns). However, I will note that this focus on individuals' experiences with remote work is often enabled by certain types of jobs that carry with them inherent privileges; this is also a narrower view of what constitutes a "family" (i.e., parent(s) with nonadult children) that may not be representative of the more expansive definitions of family.[4]

Studying the unprecedented pandemic-based work from home experiences offered an interesting and appropriate context to better understand the placement and transcendence of work-family boundaries for two key reasons. First, the provocation of substantial change across work and nonwork domains and a shift in one's overarching boundaries (e.g., beginning to work from home) created a void in structures typically in place to make sense of and organize one's

[4] Given the nature of the families and jobs captured here, I acknowledge that these findings may not fully represent everyone's experiences across the population.

multi-domain responsibilities. Thus, in this liminal period where conventional boundary structures were upended, individuals had to be deliberate in the process of rebuilding new boundary structures that they could use to subsequently manage how to work remotely as well as handle simultaneous family demands in an inherently boundaryless environment. Due to many coinciding and essential work and family demands for those in my samples, this catalyzed a more controlled (versus automatic) cognitive process of boundary work. As such, creating and managing work-nonwork boundaries became more cognitively salient and shed light on individuals' thought processes through the initial stages of important boundary work.

Second, in addition to merely creating new overarching boundary infrastructure for oneself, individuals also had to plan on a more granular level and manage their increased day-to-day use of boundaries, which was heightened in this type of blended environment. The attention needed to self-govern boundaries increased awareness of the daily minutia involved in boundary management created an opportunity to examine the lived experience of people as they were actively *doing* boundary work. That is, as people were explicitly thinking about how to they would manage numerous work and family tasks throughout the day/week and successfully oversee their intended boundaries. Altogether, studying this subset of the population during this period provided a view into the understudied yet important process involved in self-creating new boundary structures as well as monitoring and subsequently adapting one's boundaries.

Data Sources

Sample 1A: Online Communities

Using social media and other online sources of data is similar to an ethnographic approach where the researcher observes some phenomenon as it occurs but has been adapted to for virtual means as the study of communities that interact online (i.e., "netnography"; Kozinets,

2002, 2010). Social media is particularly useful because it facilitates unobtrusive data gathering (Caplan & Purser, 2019; Chatterjee & Hambrick, 2007), which means researchers can observe naturally occurring experiences as told in people's own words[5] (Vesa & Vaara, 2014). While the use of online data or netnographic methods are increasingly being used in management and related fields because of the richness that social media and online data sources can provide (e.g., Barbera-Tomas et al., 2019; Toubiana & Zietsma, 2017), scholars in organizational behaviour have yet to take a broader interest in and adoption of these organic and abundant data sources. In spite of this, the data I obtained from Reddit provided unique insight into individuals' practice and iterations of boundary work that was distinct from extant knowledge as well as played an important role in forming the basis for the more targeted questions used in Sample 1B.

I utilized social media data via the online community platform, Reddit.[6] Reddit is a global networking website that describes itself as a place where people can "*dive into anything*". Users (i.e., "redditors") are able to foster connections through authentic discussion with other users about their unique interests by joining communities (i.e., "subreddits") that are home to thousands of different topics. People join these subreddits based on the nature of the community as proclaimed by their description, which gives a sense of how these people see themselves and relate to the group through having such shared experiences. As part of these communities, users can write original posts to start a thread, reply to and comment on existing threads, and share

[5] I consulted the Reddit's guidelines for uses of their publicly available data and adhered to relevant ethical guidelines (i.e., APA; Tri-Council Policy, 2.3-2.4) for the use data that is observable in the public domain. My institution's Research Ethics Board also confirmed the acceptable use of this data based on my aims and procedures. To maintain individuals' anonymity and in line with Reddit's rules for researchers, I did not collect any information about individual users and in the main text I do not tag quotes using usernames and instead assigned randomized identifiers; I do not quote any information I deem to be sensitive information in publishable documents.

[6] There are other platforms that similarly provide social media and online data, such as Twitter or Facebook, which have been used by other researchers (e.g., Barbera-Tomas et al., 2019). However, I selected the Reddit platform specifically because its users tend to provide the necessary context and depth of explanation in a format geared for discussion that users on other websites do not consistently provide (e.g., "tweets" are capped at 280 characters).

images, videos, or other online content such as news articles. They can also show their interest in by "upvoting" or "downvoting" a post or comment, which makes the most relevant and interesting content rise to the top of the community page. Currently, Reddit estimates they have 330 million monthly active users and approximately 220 million of which are located in the United States, and 130,000 active subreddit communities.

As a result of my overarching scholarly interest in the work-family interface, I decided to initially scan relevant Redditt communities and threads for interesting experiences related to managing work and family during the pandemic. After reading several personal stories, I decided to narrow my focus on a sample of people who were working from home with children given how I could see these accounts of work-family management were inextricably tied to the use of boundaries. I established three a priori criteria and subsequently conducted manual searches by reading each potentially relevant thread and identifying whether it should be scraped for analysis. The thread needed to (i) discuss content reasonably connected to work-family boundaries, (ii) be sufficiently detailed as to be able to understand the poster's context and satisfy sample criterion, and (iii) be posted within the timeframe of the pandemic. In line with a core principle of this method, I did not interact with any posters or post on any of the threads, and thus no demographic information was deliberately collected from these individuals. Though some redditors sometimes share their gender and age (e.g., "F35" = female, 35 years old), and therefore in some cases inferences about gender could be made based on these self-identifications (e.g., the pronouns people use) combined with subreddit (e.g., "working *moms*").

To extract Reddit posts, I used the *NCapture* tool created by *NVivo* (QSR International, 1999-2020). Overall, my analyses included data based on three subreddit communities and various keyword searches in a general search to capture discussions in other communities

beyond these specific subreddits (e.g., "work from home" and "kids"; "WFH and boundaries")[7]. The specific subreddits I examined included: "r/workfromhome" (12,300 members), "r/parenting" (3.2 million members), and "r/workingmoms" (29,000 members). In total I coded 67 complete threads including both the original post and comments, which at the time of collection ranged in the number of comments from 1 - 417. Altogether my analyses included 365 excerpts posted from late March to August 2020 that met the a priori criteria, amounting to approximately 28,700 words read.

Sample 1B: Open-Ended Survey

I sought to follow up these initial observations from online communities by using a more direct approach collecting responses from individuals using online surveys with open-ended questions (e.g., Bowles et al., 2019; Shockley et al., 2021).[8] Individuals were recruited on the online platform, Prolific (Palan & Schitter, 2018). The recruitment process involved two parts. In order to target a theoretically relevant sample to address my research question, I first invited people to complete a screening questionnaire. The screening questionnaire included demographic questions and they were asked to respond to one preliminary open-ended question about their experiences transitioning to working from home due the pandemic, which altogether helped me to assess their suitability for the study. Although this approach—using an online recruitment platform—can be considered sample of convenience, I employed strict predetermined sampling criteria to strategically generate a purposeful sample. The sample criteria included adults who

[7] I also searched the following terms but yielded no additional relevant results that met the criteria: "working dad", "dad working from home", "productivity COVID", "productivity guilt", "COVID relationships", "COVID work from home", "r/CoronavirusUS", "r/Coronavirus".

[8] This project entitled, "Organizations and Employees Experiencing Change During Global Health Crisis", received ethical approval by Wilfrid Laurier's Research Ethics Board (#6502). Participants were paid 1.25 GBP for the screening survey and a minimum of 5.00 GBP for completion of the full survey (with potential bonus payments for extra time spent). Compensation was administered in Great British Pounds to all participants from Prolific regardless of their current country of residence because this platform is based out of the United Kingdom.

were currently (a) residing in the United States, (b) maintaining full-time work hours equal to or greater than 30 hours per week, (c) working the majority of their time from home, (d) had at least one child under 18, (e) cohabitating with a significant other[9], and (f) wrote a sufficient response to the preliminary open-ended question (≥ mean number of words in the screening sample). If they met these criteria, respondents were subsequently invited to complete the main survey that involved answering the full open-ended question protocol (see Appendix A).

From the 93 people that responded to the screening survey, 68 individuals met the sampling criteria and were invited to participate in the main survey that was administered two days following the screening questionnaire. Ultimately, I received a total of 49 useable responses to the main survey. This process occurred over the course of several weeks between August and September 2020. I would open the screening questionnaire, decide which people met the standard for an invitation to the main survey, collect full survey responses from those individuals, read the responses, and then repeat this process the following week with new respondents until the point that I determined theoretical saturation had been reached.[10] The mean completion time was approximately 35 minutes and respondents averaged 1042 words (total words read: 51,088). The respondents consisted of 19 women and 30 men, who were an average of 37.53 years old. The sample was 84% White, 10% Asian, 4% Black, and 2% Latinx/Hispanic.

Qualitative Analysis

My analysis was informed by a grounded theory approach (Charmaz, 2011), in which I iteratively moved back and forth between the data and my interpretations of emergent patterns.

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[9] Having a partner or cohabitating with a partner was not part of the inclusion criterion of Sample 1A, but as boundary-laden experiences related to one's family members and gender roles emerged in the initial coding, I wanted to be able to explore this more deliberately with the second sample.

[10] Under the principle of theoretical sampling (Eisenhardt & Graebner, 2007), a final number of participants is not set in advance. After coding a number of responses, data collection is stopped when no new codes or patterns continue to emerge (Guest et al., 2006).

The process of data collection and analysis was therefore quite reflexive. For the purposes of being succinct and clear, I describe the process of analysis as occurring in four main steps, albeit this process should not be considered a linear one. I also note that in general the first phase of analysis was largely the same across the two sources of data. Similar to other scholars who have used a two-step approach to collect sequential phases of qualitative data (e.g., Kreiner et al., 2009; Ladge et al., 2012), I first collected Sample 1A and created a pool of extracted passages and preliminary codes; in turn this was used to design more pointed questions for Sample 1B that would help to refine my research question and dig deeper into emerging insights. After collecting the second sample, I read each response and combined excerpts from the survey respondents with the Reddit data to be used in the entire analysis. Thus, the full list of reference quotes and preliminary codes from both samples were considered together in the latter stages of analysis. All of the data was managed and analyzed in *NVivo* (QSR International, 1999-2020).

The first step of analysis involved becoming familiarized with all of the raw text data described above using line-by-line coding to identify relevant quotes. Next, we organized similar reference statements into a list of preliminary first-order codes and start looking for connections among them that were indicative of higher-level categories of second-order codes (Ryan & Bernard, 2003). Subsequently, in the third step we derived aggregate themes in the coding structure by making connections between the second-order categories, and at this point, also searching the extant literature to help explain emergent patterns and then continuing to refine the higher-order coding structure by moving reflexively between the data and existing theory. In this evolving process of coding the data, returning to the literature, and then re-coding, the discovery and shaping of an underlying process of cognitive boundary work started to materialize (Edmondson & McManus, 2007). We then finalized the coding structure and determined the

appropriate labelling of themes that would ascribe relevant meaning to the literature (Braun & Clarke, 2006), which served to create a foundation for developing the process model that links these aggregate themes. Importantly, in creating the conceptual model, disparate knowledge on work-family boundaries was integrated with new concepts and novel connections were generated to derive theoretical insights about the cognitive nature of boundary work and contextualizing its role in this dynamic process. An overview of the analytic process and findings—how I moved from data to themes—is provided in Figure 1.

Figure 1 About Here

Findings

The findings shed light on the cognitive nature of boundary work that explains how and why people create different temporal, physical, and psychological boundaries *before* they are enacted, (in)effectively implement or move across boundaries *during* enactment, and finally, adapt or oversee their boundaries *after* enactment. I additionally found that remote working parents' engagement in and agency over their cognitive boundary work was intricately connected to their boundary context, which was most saliently shaped by relational influences stemming from work and family domain membership and their social roles. Although these are described linearly and as separate concepts, I observed this as an ongoing and effortful process that unfolded dynamically, making it a more iterative practice of boundary work to facilitate ongoing work-family goal progress. A process model linking these themes will be described hereafter.

Cognitive Boundary Work

The cognitive nature of boundary work is made up by a series of stages including anticipating boundary needs, boundary planning, regulating boundary implementation, and boundary adaptation that span pre- to post-enactment phases. Building on the foundational definitions of boundary work which primarily focused on more overt actions related to the work-home border, I define "cognitive boundary work" here as *the mental efforts applied to effectively construct, control, and change boundaries in order to facilitate work-family management.*

Anticipate Boundary Needs

Working at home with simultaneous family responsibilities left people to assess their various role demands and the boundaries that would be needed to accomplish them. This began by people making sense of and organizing all of their work and family responsibilities, first trying to ascertain a holistic idea of the exact tasks they were expected to do across work and family. Inventorying work-family tasks often involved considering the nature of demands and constraints of *each task*. Besides the magnitude or importance of demands, some tasks also had requirements built into how, when, or where they would need to be done and would have to be factored into their assessment. For instance, one working parent broke down their core weekly work duties into the number and length of meetings, the amount of intense concentration needed for important work, and mandatory hours of availability:

> "*My job is WFH but basically amounts to 3-4 45-minute meetings a week and maybe 4 hours of hardcore sit down work a week and then answering emails/messages as needed from 9-3 [Monday-Friday].*" [05-P32]

Consequently, when taken together, most people's collective role responsibilities involved a unique combination of work and family task needs to be addressed throughout the day and week.

Further and importantly, I observed how people naturally took stock of the boundaries needed to perform each task effectively—i.e., *how* a task should be done. That is, remote working parents not only assessed their role demands in terms of *what* concrete tasks had to be

done, but also the specific thoughts, feelings, and behaviours (psychological), separate space (physical), and/or time allowance (temporal) would be required to accomplish each work and family task. A task's needs could be boundary-laden in so far as it may obligate performance at a specific time of the day/week or for a certain amount of time, for example (i.e., the strength of a task's temporal boundary needs). I therefore define these "*boundary needs*" as the degree of temporal, physical, and psychological borders that an individual perceives as inherently required to effectively perform a task. Although most people did not explicitly refer to their task requirements according "boundaries" in the scholarly sense, this was often implied in how they discussed requiring a certain degree of time, space, and/or singular attention for more consuming tasks while they could do other work and family activities at the same time. This is illustrated by the experience of a remote working mom of a 14-month-old,

> *"I've been splitting up my work into 'deep work', conference calls, and light concentration work. Deep work is something you need to be really focused on and can't do with distractions… The rest of the day is light work like emails and stuff, and I can easily do that in 10 min spurts while kiddo plays."* [05-P11]

Her reference to "*deep work*" referred to any higher-level tasks that oblige one's full attention and/or should be prioritized; inherently requiring some degree of separation from unrelated demands or other roles to stay focused and be effective. In the work domain this may be leading a meeting or writing a manuscript, whereas for family these tasks could include homeschooling or feeding infant children. Conversely, "*light work*" was indicative of any lower-level tasks that are not cognitively demanding and/or time consuming. Tasks requiring less attention could therefore be multitasked across different domains without much risk to the quality of performance. In terms of work tasks this could be answering routine and lower priority emails or attending a conference call that does not require participation; for family this may be supervising children's mealtime or being nearby during their independent activities.

The more granular appraisal of all imminent work and family responsibilities as being deeper or lighter tasks was ultimately important for people in their determining how their overall work-family boundary needs could be met. During periods where people anticipated needing to engage in more cognitive-heavy tasks in either family- *or* job-based activities, this meant they expected that single-domain tasking and stronger boundaries were needed to effectively complete the task. Ideal conditions to complete deep work tasks more likely meant using a private and quiet space (physical) for a prolonged amount of time and/or during set hours (temporal) to maintain attention on one domain's specific task (psychological). Conversely, when performing work and family tasks together was a realistic possibility or deemed necessary, people could engage in a more blended approach by cross-domain multitasking. This could manifest as straddling dual worker and parent roles by, for example, synchronously focusing on responding to emails while watching television with one's children (psychological) in the family's common living space (physical) after conventional business hours (temporal). This was evidenced in one way by the nuanced categorization of different kinds of work meetings that could or could not be done while being primarily responsible for one's child:

> "*I've also been going through my calendar and categorizing meetings my babe can be on that are a little more informal and ones I definitely need to focus.*" [05-P20]

Given these working parents were subject to numerous essential demands that *required* fulfillment such as children's basic needs and a minimum level of performance to sustain employment, people were largely pragmatic about assessing their boundary needs. As such, people had to consider which tasks may be negotiable (e.g., household chores; attending virtual happy hour) versus non-negotiable (e.g., feeding young children; mandatory meetings) to help categorize their entire inventory of task needs. They were often realistic in anticipating the trade-

offs needed to be highly effective on deep tasks and increasing efficiency by overlapping light tasks in order to handle all of their responsibilities in a fixed number of available hours.

Altogether, anticipating boundary needs involved inventorying all upcoming work and family tasks and consequently determining these tasks' inherent boundary needs in order to then effectively manage and accomplish their collective work-family responsibilities.

Boundary Planning

Remote working parents engaged in boundary planning to identify and evaluate boundary alternatives that would satisfy their overall boundary needs. This ultimately allowed them to devise a schedule that would best address their upcoming work-family responsibilities in light of any constraints. I describe the subsequent "schedules" as boundary-laden because they explicate the use of *temporal boundaries* (i.e., how long they plan to perform specific tasks; at what times of the day/week they will do certain activities; pinpointing transitions between roles), *physical boundaries* (i.e., the spaces where single-domain tasking or cross-domain multitasking will take place; the transitionary or neutral areas that are not primarily designated for work or family), and *psychological boundaries* (i.e., singular or dual focus on work and/or family tasks; how they are supposed to think, feel, or act when in the employee and/or family role(s) they are meant to be playing). While this resulted in various patterns of scheduling (e.g., alternating several mini shifts during each day, alternating mornings/afternoons or full days)[11] across people according to their unique boundary needs and context, the underlying system of decision-making involved in boundary planning tended to range from some degree of structured to unstructured. The divergence in these planning experiences is used here to highlight the key distinguishing factors

[11] Albeit some of these scheduling pattern types, such as planned mini shifts, had been identified by Shockley et al. (2020), I focus primarily on the systematic thought processes underlying how and why people think about different boundary configurations and the implications their decisions may have for ultimately implementing boundaries.

of individuals' thought and decision-making processes at this stage as well as the clarity in their resulting boundary schedule.

Structured Boundary Planning. This involved a more intentional decision-making process where people contemplated various options that could meet their idiosyncratic needs. Underpinning the more structured attempts to plan included pre-emptively trying to decide where, when, and how one would perform either a single domain's tasks or cross-domain multitasking as well as transitions between these periods. The resulting schedules dictated the specific periods in a day/week one expected to be on duty for both children and work responsibilities (e.g., checking work emails while supervising children), which generally required different temporal, physical, and psychological boundaries compared to the instances of being solely focused on work or family (e.g., leading a conference call).

> "*We decided to do blocks where we each get uninterrupted work time during the day… We both got 4 hours of focused work time and 3 hours of "light" work time. It was so great. I got 2 hours in my office by myself with the door closed*." [05-P20]

Due to the time and attention being allocated to familial needs during "business hours" and probable disruptions with the increased transitions back and forth between work and family, this also meant people sometimes tried to reimagine how boundaries could be used or changed in this newly blended work-family environment. A prevalent experience was the expansion of conventional temporal work boundaries from those of a standard workday (i.e., the "9-5" spent almost exclusively on job-related tasks) to working different hours to facilitate singularly focused time and space for accomplishing deeper tasks. Remote working parents considered how to pivot from existing boundary structures they knew and creatively devised new structures to find the time "after hours" (i.e., later in the evening, earlier in the morning, or on weekends).

> "*I'm at home with my husband and toddler. We're both working full time. We are taking shifts with our daughter and then making up lost time at night and on the weekends*." [05-P59]

People therefore tended to be proactive in how they organized their boundary schedule as well as in trying to foresee and prepare for potential challenges that could arise in-situ. For example, one remote working mom was alternating shifts throughout the day with her husband to care for their toddler but also incorporated flexible periods of time as a contingency plan in case of last-minute deviations in the execution of her boundaries:

> "*My husband and I have worked out a schedule of sorts. He takes 8-11ish for work while I hang out with our kid (2 next month) and try to answer some emails from my phone. I work 11-3ish and, because my daughter naps 12-2, my husband can work for a bit then too. Then I'm back with babe while my husband finishes up 3-5. I get some work done after bedtime if need be. It isn't ideal. I get so much less done than I'd like, and we both have to be flexible for days when a call pops up outside our "normal" time frame. But my work has been super understanding (thankfully!) and my husband is... getting there.*" [05-P06]

With such a plan in mind, people tried to be deliberate about setting themselves up for success—to ensure adherence to the boundary schedule the wanted to put in place. Put simply, part of structured planning also involved thinking about ways to facilitate their intended boundaries, especially when these structures were completely new. People thought strategically about whether they could create "single-use spaces" (where possible) and then how to go about setting up those spaces in a way that would keep them focused on one role and mitigate distraction from other roles, for instance. Similarly, many people discussed the use of tools such as calendars to keep track of their boundary-laden schedule or by using a central message board to make it easier for keeping others up to date with their current intended boundaries.

> "*We have a dry erase board on the outside of the office. If there are any ultra-important meetings, we notify it on the board and make sure kids and pets are downstairs being occupied, typically with a TV or art project. Outside of that – everything goes on calendars now. Everything!!!!!*" [b3dd13]

Being able to establish a predictable boundary schedule was most often available to those who could manage to alternate episodes consistently while working from home with another person throughout the day or week; this tended to involve spouses but under some circumstances

included other relatives, friends, or by outsourcing paid help. In addition, these elements of planning involved ongoing communication between the people who were alternating between shifts focused on single- or dual-domains. This quote exemplifies how one working parent contemplated the family's scheduling options and how creating a more robust structure of boundaries together helped to form clear rules of enactment between spouses:

> "*I've often seen parents trying to split time, but one ends up doing way more. We decided 'nope morning is you and afternoon is me. That means all diaper, meals, naps are yours during your time'. If the other person tries to bother without an emergency just redirect, 'sorry, it's your turn now, I have to focus but I'm sure you can figure it out!'.*" [05-P95]

Unstructured Boundary Planning. This was a generally unsystematic approach that involved little up-front mental effort to schedule the use of any boundaries as a means of managing and/or performing various work and family tasks. A salient pattern emerged in remote working parents' experiences who were engaged in this more "ongoing shift", such that one or both parents were on duty for both family and work consistently throughout the workday without any clear delimitation of times or spaces to focus solely on one role. As a result, they would usually be overseeing responsibilities of multiple domains for the majority of their day. Lacking a clear boundary schedule had noticeably more uncertainty and volatility in terms of when, where, and how the focal working parent was supposed to be engaging in single-domain tasking versus cross-domain multitasking.

> "*It's my daughter's first day of kindergarten, it's a Monday when my husband and I have conference calls throughout the day, and we have a 1-year-old we're chasing around.... I know virtual school is necessary, but it's so difficult*." [08-P89]

Most remote working parents who had this kind of experience were those who ultimately could not manage to create any sort of schedule because of consistently unforeseeable demands and/or being the primary individual responsible for childcare while trying to work full time. Thus, those who were unable to reliably schedule the use of any pre-set blocks of singular work

and/or family time often faced difficulties from managing multiple domains' demands on-the-fly and tended to be in limbo between work and family. This also meant there was an absence of rules for boundary enactment for oneself and others. For instance, this remote dual-earner couple with a 14-month-old were had unpredictable and burdensome jobs, meaning it was difficult to form any plan and ended up constantly going between recurrent work and family demands:

> "*… right now it's just a daily juggle of who can watch the baby at any given moment. I cannot do 2 more months of that.*" [05-P01]

Notably, that the lack of systematic decision-making or explicit scheduling was not solely the person's choice to do so, but rather, it tended to reflect their limited agency to shape boundaries in a way that worked for them. People who were solely responsible for overseeing childcare during the day while trying to work full time were left with few options to help allow stronger boundaries in even small pockets of their schedule.

> "*Due to the nature of his job, my husband isn't able to switch off with me in childcare… I think we'll be okay until after lunchtime, but what are some good activities to occupy a 1-year-old while I am in a virtual meeting or trying to write emails in the afternoon*?" [05-P130]

Altogether, boundary planning captures remote working parents' varying experiences with identifying, evaluating, and selecting the schedule option(s) to best meet their boundary needs in light of any constraints. For many accounts, this involved designing nuanced boundary schedules by negotiating a combination of stronger boundaries to singularly focus on either work- or family-related deep tasks that were balanced with periods of weaker boundaries when light work and family duties could reasonably be multitasked. This respectively ensured one's effectiveness in meeting important role expectations while at the same time maximizing efficiency in addressing the totality of one's multi-domain responsibilities.

Regulating Boundary Implementation

At this stage, people were actively trying to implement boundaries, which interestingly, compelled some degree of cognitive oversight to stay mentally present and engaged in a role as it is expected to be done, in certain place, and for a specified amount of time. In addition to reliance on one's internal drive and capacity to stay engaged in the work and/or family role they were meant to be in, people had to try to maintain or re-establish boundaries through external distractions and interruptions or role transitions. Because boundaries are at their core socially constructed to prescribe and proscribe where, when, and how domain-relevant thoughts, emotions, and behaviours are expected to occur, what underlies the intended boundaries people aimed to enact is an expectation for what they *should (not) be doing*. Thus, it was apparent that individuals' psychological resources (e.g., energy, attention) and capacity to internally regulate boundaries played a crucial role in effectual boundary implementation as well, yet people do not always have full control over these things.

Perhaps the most striking example of regulating boundaries was in terms of the psychological boundaries that are supposed to demarcate the expectations for individuals' internal and external states during certain periods. Given that psychological borders dictate the inherent rules of a work or family role and are largely self-policed especially in this kind of context, this type of boundary was intensely important but at the same time difficult to manage. As such, in periods where people were meant to be single-domain tasking on either work or family, this involved monitoring one's attention and staying in the correct "mode" they intended to be in, or possibly bringing focus back if distractions arose. Available psychological resources had to match the strength of the boundaries during a specific episode in order for an individual not to disrupt their own intended boundaries (e.g., when the mind wanders to off-role thoughts). This became obvious in instances where there was misalignment in energy or attention required

of a pre-set period for deep work and/or in trying to multitask. Take for example people who had planned blocks of time where they *must* engage in cognitive-heavy work tasks because it is their child's nap time and will be one of their only times to do so. If they just so happen to be feeling fatigued or distracted during this period, this can make it challenging to sustain the concentration needed to effectively perform mentally demanding tasks they are meant to be doing.

> "*There are so many things to do just to keep my household running, I can't seem to sit and focus on work even when I do have some time to do it without interruption.*" [08-P79]

Moreover, during episodes of cross-domain multitasking where a working parent was both on duty for their children and in the midst of completing job tasks, straddling these often-conflicting psychological rules surrounding the norms and expectations of each distinct domain could be cognitively onerous to perform. Such as this remote working dad with a toddler at home who was playing both "dad" and "employee" roles simultaneously:

> "*I have a 2-year-old that's a daddy's girl. I incorporate her into my zoom calls. No one has issues with it. She says hi to people and will sit there and write on the paper I have setup next to me for her. Other than that, she runs around, over, under me to play while I work. I've just made her part of my work. It was really difficult when I first started [working from home].*" [08-P144]

In either instance where people intended to be solely engaged in a single domain's task or multitasking cross-domain activities, there was cognitive effort involved in facilitating adherence to different domain-specific thoughts and behaviours as set out by their intended boundaries.

Further evidencing the difficulties associated with internally regulating intended boundaries, I observed how remote working parents were intentional about finding ways to support these boundaries during implementation. People discussed various ways how they thought boundary-laden *signals* helped to clearly prescribe and reinforce which "hat" they should be wearing during a given period, or alternatively, to signify that one should mentally disengage from one role and then fully enter another through required transitions. For instance, by using

spatial features and signs, changing between work and leisure clothes, or using transitionary periods between periods of work- or family-focused time in their schedule (e.g., nonwork-nonfamily time). Consequently, it appeared that without ostensibly tricking one's mind into deliberately and fully crossing psychological boundaries at the point of transition, people noted it would be difficult to "log off", both literally and figuratively. By re-implementing a transitionary period in a more neutral domain that did not include either work or family—via a "fake commute" at the end of the workday in this case—it allowed them to mentally shift more easily between roles as needed, for example.

> "*I go for a walk [between work and family time]… I get to pretend that's my "commute" and transition time. I try to empty my mind, focus on the trees, leaves flickering, birds chirping, etc. Some people prefer music and ear buds, but I just crave silence.*" [08-P97]

More broadly, this highlighted the interplay of behaviours and cognition at the point when boundaries are being enacted. The use of some overt actions served a constructive purpose for facilitating the covert action of cognitively overseeing boundary implementation so that the person could remain completely mentally engaged in the role(s) they were supposed to be doing.

Altogether, in referencing enacted boundaries, respondents' descriptions were commonly underscored by the mental energy and attention associated with the (in)effective implementation of such boundaries. The capacity to regulate boundaries also influenced their management of distractions, interruptions, and/or role transitions, and ultimately, impacted remote working parents' ability to fulfill overarching work-family needs as planned or otherwise.

Adapting Boundaries

Following these boundary-laden experiences, retrospect offered individuals the unique opportunity to understand the efficacy and future utility of their boundary-based approach to work-family management. These boundary experiences and the impacts on their holistic and

work-family goals provided feedback that informed individuals' thinking about how they could adjust and improve aspects of their boundary work practice in the future. Taken together, this demonstrated how cognitive processing of one's boundaries did not end at the point they were implemented; the iterative nature of boundary work transpired through learnings that were fed back into earlier stages of cognitive boundary work (depicted via the feedback loop in Figure 2).

Self-Reflection. Remote working parents processed many parts of their boundary-laden experiences. In particular, they focused on how their current boundary approach shaped their ability to fulfill important work and family responsibilities—the underlying purpose of such boundary work—but also the sustainability of their boundary structure for them as a person holistically. People first assessed whether their boundary work was helping them be effective in addressing all their necessary work-family responsibilities. In doing so, they also often tried to understand why any performance failures may have occurred when implementing boundaries and reflected on anything they had not accounted for such as some unforeseen issue or constraint that arose outside their initial appraisals. Specifically, based on their subsequent experience of trying to perform certain light and deep tasks with the corresponding boundaries, they thought about whether their initial inventory of tasks' boundary needs were properly appraised. This provided an indication of whether some "light" tasks should actually be categorized as "deep" tasks, and thus require stronger boundaries (or vice versa). Intriguingly, I observed how individuals' level of self-awareness was vital in helping them to evaluate their boundary work, with respect to recognizing the limits of their own abilities to maintain boundaries. This example highlights how people may have acknowledged the constraints they faced as well as the role of their own capacity in how long they could realistically stay fully engaged in deep work and uphold strong boundaries or be effective in performing multiple domains' tasks simultaneously:

> "*I can't really do more than 3-4 hours of [deep work] in a day anyways, it's too taxing. I do that during nap time plus the 1-2 hours before or after nap. It's tough to do conference calls with kiddo around, but I wear a headset with a directional mic, mute myself when I'm not talking and warn people that my child is around. If I can I schedule those during meals and give my kid something that takes a while to munch on*." [05-P11]

Relatedly, remote working parents considered their planning decisions to use boundaries in a particular way and how this influenced their own efficacy in periods meant for deep work or light work as well as whether they found it difficult to manage and move across boundaries as planned. This meant developing a more nuanced assessment of their planned combinations of light work and family tasks that perhaps should (not) be combined, or if the times and places they allocated for certain deep tasks or light tasks were conducive for performance. Specifically, some people realized that different scheduling configurations of single-domain tasking and cross-domain multitasking mattered for adhering to intended boundaries or to avoid disruptions, such that many working parents found it easier to schedule deep work time during a specific range of hours in the day (e.g., in the early morning) when their mental capacity was at its peak.

Moreover, remote working parents evaluated whether their current boundary-laden approach to managing work-family responsibilities would be sustainable for their lives overall. That is, beyond necessary work-family role responsibilities that fundamentally required their immediate attention, remote working parents also considered the longer-term consequences for their well-being, satisfaction in their various domains and possibly those outside of work and family, and their broader goals for the future. In determining how useful their approach would continue to be, people reflected on other relevant information about the broader emotional and psychological impacts they were feeling. Such as one working mom who was processing her experiences and trying to further understand how she could shift her family from just "surviving" and heading down a path of burnout, toward a long-term solution for work-family management:

> "*So, I feel that now is the time to find a way to go from survival mode to organising our family and work life somewhat more sustainable, so we don't wear ourselves out completely over the coming months.*" [05-P62]

In addition, some people recognized that seemingly having blinders on to focus on boundaries with the express purpose of work-family goal attainment was perhaps omitting essential self-care activities (e.g., sleep) and another important part of life—i.e., the nonwork-nonfamily, "personal life" domain. In spite of knowing that creating some time and space to engage in these activities would likely improve how they were feeling overall (e.g., to reduce stress), people seemed to have a hard time with prioritizing and incorporating any roles outside of work and family, which limited the perceived sustainability of such a strategy moving forward. This consequently made people think about whether their situation and the personal trade-offs they were experiencing would be possible to endure, and in turn, also illuminated the ways in which a seemingly unsustainable solution would impact their longer-term goals (e.g., for career advancement).

> "*All I do is move from playtime to preschool to work and the hour or so I can get to myself at 9pm (when I really should still be working anyway) just isn't cutting it. I mean, we get outside, but I'm never "off." I'd do anything at this point... Is it still possible to take leave from work? I mean, I'd rather work and take leave from parenting, but something has to give…*" [05-P126]

Overall, this amounted to an accounting of whether the work-family tasks they anticipated, intended to perform according to their boundary plans, and boundaries they were able to implement were or were not serving their needs well and why.

Boundary Adjustments. These insights gleaned by remote working parents altogether contributed to important learnings about themselves and their boundary-laden experiences that could be fed back to improving their boundary work, as evidenced by the often-simultaneous discussion of reflections and adjustments. The contemplation of boundary adjustments manifested in both the processing of potential changes people thought about making and in referring to changes they had already made to boundaries and why they had decided to do so.

Realizing the actual cognitive demands of certain tasks ultimately allowed people to re-think their boundary needs in terms of whether particular tasks were best suited to be treated as deep or light tasks going forward and tailor their subsequent boundary work accordingly. Reappraising the energy and attention that were really required to engage in some deep tasks effectively or still be perform when multitasking work and family helped to shed light on the periods when and how remote working parents could be more productive or to understand why issues arose during implementation. Thus, instead of passively accepting futile boundary options or disruptions to their boundaries, people thought about the ways they could actively address create and implement more useful boundaries, such as by re-designing some of their boundary schedule and adopting stricter practices with others to manage boundaries:

> "*We share our schedules for the next day before bed and workout who has her. [My husband] takes her for the morning before her breakfast, then I take her until lunch/nap, then he takes her after nap. I told him he needs to move all his calls either to morning or afternoon. I can't do this, call, then hour free, call then half hour free, just move them*! [05-P109]

Even when boundary work was generally working well for fulfilling work-family responsibilities, people discussed the ways they could improve their boundary plans to promote productivity according to their individualized needs and abilities (e.g., when/where they are able to be most focused). It was not just that they were able to accomplish everything that needed to be done, it was also about being more effective and trying to reach a state that many call "flow" that occurs when mentally engrossed in deep tasks. For example, this working mom learned for herself that even though her children were distracted with other activities, they would still make too much noise for her to concentrate; she therefore moved important meetings to be during their child's naps as well as expanded her work's temporal boundaries to include other times of the day and week that she felt allowed her to focus better and be more productive:

> "*I'd try to keep your most concentrated work for nap time if you can swing it. I have switched to working a few hours between 6-8 a.m. and 8-10 p.m. in order to answer emails before/after my kids are awake*." [05-P130]

Consequently, the self-awareness cultivated in reflecting on these boundary-laden experiences helped to generate insights that could facilitate better planning but also to turn the person's thinking toward crafting boundaries in a way that would allow them to thrive by addressing their holistic needs outside of just those immediate work and family responsibilities.

> "*It's not ideal but I like having a day on, day off kind of system – it works better for my focus levels. Some of the days I either can, or have to, focus on childcare (10.5months) and some of the days I can, or have to, focus on work. I get more work in during naps, plus mornings and evenings of my childcare days. I've been struggling to find time for myself in all that though, hence the idea resonating*." [05-P100]

Further, I observed how remote working parents sought out additional insights to supplement learning from their own self-reflections in effort to contemplate and create better long-term solution(s) with the use of boundaries. Talking to friends, family, or colleagues as well as posting on social media platforms or via internet searches and reading articles to search for solutions ultimately contributed to their ability to make constructive adjustments to their boundary work. The sheer number of Reddit threads and posts related to this topic is in and of itself evidence of individuals mentally processing their own experiences in creating and managing boundaries as well as searching for suggestions to inform their potential changes to boundary planning and help them be more effective in managing work-family needs.

> "*I like how you're categorizing your work. I think categorizing sections of my day like this will really help me focus when I need to and not feel guilty during the light work periods…*" [05-P12]

People shared their experiences as well as crowdsourced different solutions for their particular challenges and identified ways to handle other issues beyond immediate multi-domain goal attainment. They assessed their plans and researched other options to make their approach to managing work-family less taxing overall and/or make it more sustainable in the long run by

incorporating time for stress recovery and enjoyable activities. This is illustrated by an experience of one working parent who was looking for ideas to facilitate a "real break":

> "*Has anyone figured out how to get a truly restorative break from the working/ childcare shuffle? I mean a real one, where you feel actually rested, not just guilty for plopping the kid in front of the third video of the day or just settling for only an hour or two of really bad quality work? ... I'm looking for creative ideas, so I'm hoping someone else is just more inventive than I am! Losing my general optimism over here*…" [05-P126]

Many people were looking for ways to incorporate time for themselves outside of work and family to engage in personal life activities. Although in many cases all they could manage was some overlapping time for both family and personal life activities, this was ultimately one way of finding time for rest and play, beyond the constant obligations of work and family duties.

> "*I've been going for runs more often and these are nice since we bought a running stroller so I can take my son with me while running. I would say that this has been extremely helpful and a great strategy for getting the time to myself that I need*." [62ae72]

Altogether, it was evident in many accounts of remote working parents' experiences that boundary work was an evolving practice and one which, if appropriately used and modified, would be instrumental in achieving efficacious work-family management:

> "*In the beginning I did not feel very effective as an employee, but I am starting to feel much more effective and feel I am contributing a lot more to the team as I have set up better boundaries at home*." [5e601d]

In sum, the adaptive nature of cognitive boundary work became clear through individuals' accounts of their experience-based self-reflections and then subsequent adjustments vis-à-vis re-appraising boundary needs and changing boundary plans.

Boundary Context

As part of their membership in roles associated with being a working parent, this meant these individuals were also embedded in familial, organizational, and societal systems. While job and family characteristics and the essential demands stemming from these roles may naturally set

out some baseline requirements for boundaries (e.g., being available during certain work hours), it became clear that important relational influences stemmed from family and work domains. That is, other domain members' *discretion* to convey (un)acceptance of an individual's intended boundaries could have a continuous impact on boundary options and/or the disruptions one faced. Furthermore, because these are domains and relationships which are entrenched in broader social systems that dictate relevant expectations for how certain people should think, feel, and act in work and family, the corresponding gender roles also influenced cognitive boundary work differentially for working mothers and fathers. Consequently, these factors contributed to creating a context that could not be divorced from individuals' cognitive boundary work, and although these are described separately, the full weight of familial, organizational, and social systems was only borne out of the *interplay* of these salient contextual factors.

How Family Domain Membership Influences Cognitive Boundary Work

Spouses, children, relatives, and/or other cohabitating individuals had a noticeable influence on both boundary needs and options as well as the environment in which boundaries were meant to be implemented. Whether one's partner was employed and where/when their job had to be done were part of initial considerations that could affect the inventory of work-family tasks a person was responsible for, and accordingly, the available options to enact boundaries. More importantly however, dual-earner remote working couples had to contend with their partner's willingness to engage in collaborative boundary planning in order to be able to fulfil their own important boundary needs. Cooperation in scheduling was particularly critical for those trying to work remotely with younger children doing virtual school for example, as this meant their parent(s) would need to supervise them for some portion of the school day that tended to overlap with times in the workday that many deep tasks are expected to be done.

> "*We both have similar jobs and working only mornings or afternoons wouldn't be feasible for either of us. So, we mapped out when our main recurring meetings were and divvied up the days. I get Mon, Tues am and Fri to work, he gets the other half*." [05-P100]

However, not all remote working couples were able to have equal or equitable access to boundaries (e.g., if one partner was seldom willing to alternate shifts), which was apparent in the gendered experiences of boundary work that will be discussed in the next section.

Family members also posed salient challenges because they were sharing the same blended work-nonwork environment, making it more or less difficult for individuals to adhere to their intended boundaries and potentially requiring more effort to regulate interruptions. A lack of acceptance for the focal remote working parent's boundaries occurred across various types but seemed to most severely interfere with the individual's psychological boundaries, such that they necessitated either momentary or prolonged switching across domains that ultimately affected their focus and performance. For instance, the experience of this personal banker who had their six-year-old child at home:

> "*When I am in work mode and my child needs me, I have to switch to mommy mode instantly. While I was at work [before COVID], I can stay in work mode without the distractions*." [5f22b8]

Though, this was not unique to children, as these disruptions occurred between spouses too:

> "*It is sometimes more difficult if my wife asks me for a lot of help or has random things she wants to talk to me about during the day. This can be a distraction and make me start to feel stressed about work. There are times when I keep the door open and she asks me something, but [she] can tell I am getting stressed so she shuts the door on her way out and leaves me alone for a while. This has helped and doesn't make me feel like I am just shutting her out*." [eaefe1]

Disruptions could also be more subtle violations from others in the same work-nonwork environment. Cohabitating household members could, without crossing the threshold of any literal boundary, indirectly impact the shared space by creating environmental distractions (e.g., noise emanating from other rooms) that increased the energy and attention required to maintain

intended boundaries. To manage these disruptions in the shared work-nonwork environment, some remote working parents thought extensively about different ways to communicate prescriptive and proscriptive expectations for family members' behaviour that would help maintain their intended boundaries. Yet, finding better ways to deliberately signal the intended strength of their boundaries to others—such as by providing instructions, using spatial features (e.g., a locked door), and/or incorporating physical signs (e.g., a stop sign, whiteboard)—were sometimes ineffective to curb intrusions of family members.

> "*Trying to keep my sanity and personal bubble of space but no one listens or honors the "dads in a meeting, go away" sign*." [6e06dd]

This was particularly relevant for those with cohabitating dependant family members who lacked the ability to regulate themselves (e.g., young children). This again gave rise to how a partner's willingness to fully oversee childcare during their scheduled shifts played a crucial role in helping the focal working parent maintain stricter boundaries for single-domain tasking around deep work as planned.

How Work Domain Membership Influences Cognitive Boundary Work

Organizational members such as managers and team members shaped an individual's appraised boundary needs and boundary scheduling options as well as could subsequently make it more difficult to regulate boundary implementation or make changes to boundaries. Given that managerial discretion can affect how certain parts of an employee's job are expected to be done, this sometimes impacted specific boundary needs around work-related tasks (e.g., leniency vs. strictness around when and how work tasks are done) and how individuals planned to structure their work-family boundaries. I observed how fewer work driven restrictions over day-to-day types of boundary scheduling influenced the ease in which remote working parents would be able to address and adjust their collective work-family boundary needs or plans. For example,

managers who were amenable to changing temporal work boundaries (e.g., extending beyond the "typical workday"), modifying expectations around some job demands (e.g., being allowed to miss non-essential meetings), and/or allowing and trusting employees to move between work and family more freely throughout the day (e.g., blocking out unavailable periods in their work calendars). This facilitated individuals' desired boundaries to focus solely on family during conventional business hours or multitask across domains while still upholding job duties.

> "*My manager has been very hands-off and accommodating of basically any work schedule that I would want. They have kids themselves, so they fully understood needing to be flexible with when I worked… I think the fact that they let me have complete control of my schedule helped because it gave me the flexibility to form my own plans. It was nice not check to make sure my plans that I made with my wife also meshed with what my supervisor expected of me*." [62ae72]

Likewise, organizational members who were accepting of an individual's work-family boundaries tended not to be a barrier at the implementation stage, such that they would rarely disrupt the focal individual's boundary plans or may even actively help to facilitate them. This meant that the regulation required to manage boundaries in the present moment as well as monitoring them over time was more straightforward for these working parents.

> "*I have made it clear to them that at 5pm I am done for the day and they respect that. They have also made it clear to me that if I am asked to work later or put in time over a weekend that I will be equally (if not more) compensated with time off when needed. There is also an unspoken agreement that if I need to go to a doctor visit for example, I can go without taking [paid time off] or sick time because they trust that I will make up the time later that day or throughout the week. I think that all of the team members trusting each other and knowing that we can rely on each other … and my boss making it clear that he understands that there is a definite line between work and home life has also made holding the boundaries in place much easier*." [458323]

And were also understanding about any "disruptions" from the employee's family members:

> "*My team is very understanding. When this pandemic first started and a kid would come into the room and ask me a question while I was on a zoom meeting, there would be laughs. That's a big distraction. Now it's normal. We all just keep talking*." [b3dd13]

Whereas these employees found it easier to see path to meeting all boundary needs inclusive of those for family, other organizational members who were less understanding of the cross-domain demands faced by some employees could be unyielding with work demands and procedures. Constraints stemming from organizational members ultimately made it more challenging for these remote working parents to effectively plan and implement boundaries in a way that would be most effective for performing work *and* family responsibilities as needed. As a result, some individuals had less control over their own boundary scheduling decisions and were therefore generally unable to decide when it would be best for them to attend entirely to technical deep work tasks, facilitate periods of performing both light work and family responsibilities, or spend focused and necessary time on children's needs throughout the day.

> "*We're trying something similar. My informal meetings tend to be in the morning (all-hands, team meetings) so I'm taking the baby in the morning where I'm not required to do anything except listen. My more formal meetings tend to be in the afternoon so that's when my husband will take him. I hope it works. The thought of getting 2 hours of uninterrupted work time makes me giddy. My job is flexible, and I like the idea of declining meetings where I'm not essential. My husband's job… is doing client work and he can't just not accept client meetings. So, we'll see how it goes. My husband isn't wild about the shift idea*." [05-P04]

In addition, some organizational members were seemingly unaware of or showed little concern for how their actions would impact a colleague's intended boundaries. Despite remote working parents trying to communicate their needs for organizational members that would help maintain their intended boundaries, some were unresponsive to such signals used by the focal employee which were meant to demonstrate when they were attempting to enact stronger boundaries around family. For example, receiving last minute or after-hours requests for a work meeting seemed to not give due consideration to a colleagues' holistic work-family needs and ultimately would disrupt the individual's intended boundaries:

> "*Tomorrow concludes my 5th week of quarantine with 2 [children] under 3, and my husband works essentially outside the home… I get so frustrated when meetings start*

> *late or go over, or "Do you have time to hop on for a call right now?" NO, I DO NOT!!! I have small children and no childcare*!" [08-P84]

How Social Systems Influence Cognitive Boundary Work

These individuals, and their family and work domains, are also rooted in social systems that fundamentally ascribe different norms and roles to working parents based on their gender. As such, it is not only that women might be compelled by role prescriptions to take on the additional responsibility in managing family/household duties that can also proscribe their work boundaries from receiving priority, but at the same time, men's conventional social roles largely permitted them to protect their work boundaries without much contest and which can come at the expense of family/household matters. This consequently had a polarizing effect on the distribution of effort—both physical and cognitive—taken up in work-family management for a family unit. But more importantly, this impacted how boundaries around work or family roles were allocated and treated between partners. To be clear, I focus here on the experiences of people in heterosexual relationships, as traditional gender roles tend to be most clearly adopted in these couples. Thus, the gendered nature of cognitive boundary work became evident in important but paradoxical ways: working mothers had to apply more effort to cognitive boundary work as a necessary tool to fulfill their disproportionate work-family responsibilities yet they also tended to face less acceptance (i.e., more barriers) toward the boundaries they intended to use that would help them perform their family- and job-related duties.

Cognitive Boundary Work as Uniquely Effortful for Working Mothers. As a consequence of the gendered social systems that we are all embedded in, the pre-existing asymmetrical distribution of household and family labour that is prevalent in heterosexual

couples had a domino effect on working mothers' boundary work.[12] Specifically, when the sudden pandemic-related rise in nonwork demands occurred (e.g., increased childcare, homeschooling, household duties) that in many instances represent deep tasks for the family domain, this grew their inventory of work-family tasks and more meaningfully affected their inherent boundary needs. As such, working mothers' mental effort had to be allocated toward intricate boundary scheduling out of *necessity* in strategically piecing together specific times and spaces to give their full attention toward a single domain (e.g., homeschooling or client meetings), and to multitask across domains (e.g., answering emails while supervising play time). Otherwise, it could be nearly impossible to deal with the exacerbated amount of time needed for family tasks while still working full-time, which were roles increasingly at odds.

> "*My job is still [full-time] and requiring news constant conference calls or Zoom meetings, but my husband has had half his workload eliminated for the present. Despite that I'm still doing 99% of the childcare for our 4-month-old. He's fine with her as long as she's happy but the second she gets fussy he wants me to take her so he can get back to his video games. I love the man and he does do the majority of the housework but I need him to jump in and help more during workdays*!!" [05-P112]

More broadly, doing cognitive boundary work for oneself and other family members was almost obligated for working mothers who could not afford to fall back on traditional systems of family management, by which their boundaries particularly around work were by no means considered "a given". In other words, if women did not take charge of and apply their own agency vis-à-vis the cognitive efforts allocated to boundary work, then the existing gender-normative structures would likely have forced them into being the constant caregiver with little room to separately perform important work tasks.

[12] It has been established by other sources that women work more total hours across their collective work and family demands prior to and throughout the pandemic (e.g., by multitasking work and family; extending shifts to cover all necessary responsibilities; Shockley et al., 2020). However, the purpose here is to emphasize how there were also boundary-laden disparities in working mothers' experiences of work-family management.

In spite of some couples indeed dividing up the increased physical tasks associated with childcare and household demands—as many partners willingly alternated shifts—this did not account for the ongoing mental load involved in anticipating, planning, regulating, and adjusting boundary work for the family unit who were also sharing a work-nonwork space. Evidenced in many ways by the cognizant discussion of these experiences in our survey responses that were unique to women as well as the sheer number of Reddit threads and posts made by women, all of which elucidated how they were markedly more aware of the pre- to post-enactment aspects of boundary work than men.[13] Importantly, this suggested that not only were women doing more to actively process these more salient experiences through self-reflection, but that they were also looking for additional support in boundary planning and implementation for the entire family's betterment. Further, the continued oversight of the family unit's adherence to the boundary plan was another way in which women exerted more effort to monitor boundary work for themselves and other family members. Namely, by creating and overseeing boundaries for others (e.g., when one's partner would be engaged in strictly work time) and in making sure their spouse's boundary schedule was working well for them or to co-create adjustments to help them manage. The experience of a remote working mom of a 2-year-old illuminates how women made a special point of ensuring their spouses got a break (i.e., separate of work and family) as part of her own boundary planning and in spite of her own needs:

> "*I feel like less of a person overall… I feel like there's no time to not think about other people right now. The team I was recently given has expanded and they're all a bit anxious about the changes so I'm managing their anxiety, trying to wear out a 2-year-old when I'm already tired from work and making sure my husband gets a break. There's no more me*." [08-P78]

[13] While the majority of online quotes were taken from the "r/WorkingMoms" community, there was not an equivalent for "working dads", despite deliberate searches for men's accounts of similar experiences.

Those in single-earning families also shed light on the gendered nature of cognitive boundary work. Despite being a single-earner for the household, remote working women still took on the "chief executive" role in their families and the majority of the mental load for their collective boundary work. Conversely, in male single-earner households women were usually in more of a "specialist" role that was solely responsible family management and which a primary duty included protecting the male partner's work boundaries. For these female sole-earners with non-working male spouses, this manifested as pre-emptively identifying boundary facilitation activities for family members with the aim of limiting potential disruptions to their own scheduled boundaries for single-tasking work responsibilities. This also included maintaining oversight of whether these boundaries continued to be effective for the whole family. For example, this working mother had to organize and describe what her stay-at-home husband can and should be doing with their children throughout the week in order to ensure her own scheduled deep work time would remain uninterrupted:

> "*He wasn't helping her with any schoolwork, so I would check what her assignments were and help her… My husband doesn't help with the housework, so I do that on Saturdays… There was some confusion and friction with me and my husband on who was supposed to do what when the kids went back to school. I typed up and printed out their daily schedules and that helped… The first week of virtual school was challenging. My [11-year-old] daughter can watch the time and log on with prompting, but my [5-year-old] son needs someone with him during his school time to help him log in and navigate on the screen. I printed out his schedule and gave it to my husband so he can quit asking me for the info.*" [5ecd34]

Thus, across those employed and not employed in paid labour outside the home, it tended to only be men that took on less of the cognitive boundary work mental load for the family, whereas women exerted substantial cognitive effort to create and manage their own boundaries as well as to assist in shielding the currently working spouse's boundaries around job responsibilities.

Disparate Constraints on Working Mothers' Boundaries. As mentioned, working mothers' collective duties were more onerous and therefore the corresponding boundary needs

became more difficult to fulfill. However, the available options to create and change boundaries that would facilitate necessary work-family management were also constrained and intended boundaries were made more difficult to regulate due to external disruptions. Boundary planning inherently became more complex because there is only a fixed amount of time one can allocate to each role separately or as ideally prescribed. Yet working mothers had to manage with more restrictive access to clearly defined physical, temporal, or psychological boundaries and still perform their collective—and disproportionate—work-family duties.

There was a palpable indifference towards working mothers' boundary needs when they tried to engage in boundary planning. Men tended to consider their job a priority regardless of how it compared to their partner's work, and many did not attempt to engage in collaborative scheduling. While at the same time recognizing that a separate workspace would be crucial for performing job-related demands and especially deep work tasks, women's access to work-specific hours and spaces often received less priority (i.e., to use physical and temporal boundaries). Altogether, this limited opportunities for women to focus solely on job responsibilities and establish some stronger boundaries.

> "*My partner seemed to have no real change to his workday. The only difference for him was now he was working from home full time and no longer had a commute. He would go upstairs to his office and close the door from 8:30AM to 5:30PM whereas I now had to manage my own full-time job on top of what needs my [six-year-old] son had with his remote learning expectations*." [5f19ad]

This unique lack of access to separate spaces also made it harder to manage psychological boundaries, which under prolonged conditions could start to have significant and wide-reaching impacts, such as this working mom of a two- and four-year old:

> "*I take on the brunt of the childcare because of his job requirements. He's basically in the office, the office is just our basement. Meanwhile I'm emailing colleagues while nursing or checking emails at the buffet holding a child. Our baby doesn't nap anymore, which means I'm fighting for a 'break' to work… It's been hard on my*

> *mental health, and honestly the feelings of being overwhelmed have been bringing out anger towards my husband I didn't know I had. It sucks*." [05-P113]

Consequently, men also did less cross-domain multitasking and took more "personal downtime" from their work and family duties. This meant the only option working mothers had to perform their various tasks was in sometimes ineffective ways (e.g., cross-domain multitasking of deep tasks that in fact compel isolated time, space, and singular attention). The unavailability of important boundaries ultimately made it difficult to maintain psychological boundaries around work and resulted in women instead spending considerably more time performing both work and family roles in undesirable or boundaryless work-nonwork spaces (e.g., at the kitchen table) to fulfill all their responsibilities.

> "*We have both been working from home, but my husband took leave today "for a stress break" and he's still acting like our kids don't exist! I'm about to explode because while he plays video games, our two-year-old is losing it, I'm working on a deadline, and my kindergartner has not done any schoolwork*." [05-P40]

This complicated working mothers' boundary planning but the experience of regulating boundaries appeared markedly different for women as well. In some cases they were forced to blend work and family when they were scheduled for period of deep work (e.g., leading a meeting) and supposed to be implementing stronger boundaries. In dual-earner heterosexual couples, the strict segmentation of men's boundaries was enabled by their partners who would be intentional about ensuring their husband's strict work time was not disrupted as much, whereas women's intentions to have stronger boundaries around their planned deep work time was not equally permitted to be free from disturbances. For instance, if a remote working couple planned to alternate morning (one watches the children and works) and afternoon shifts (one can be solely focused on work), a working mother's scheduled single-tasking time appeared to more frequently disturbed by family members. Thus, while the planning of boundaries may be ideally conceived as "equal" time being split between dual-earning spouses—i.e., each partner initially

gets a relatively similar amount of time scheduled to be highly engaged and focused on deep work tasks—there were more deviations from these plans for women in practice. Enduring such cross-domain disruptions consequently inhibited performance and multi-domain goal progress and drove exhaustion in a more salient way for working mothers as they had to exert more energy and attention to regulate their intended boundaries.

> "*We're both working from home and trying to care for our 5-month-old who is fighting naps like his life depended on it… [my husband] had a busy morning so I understood and tried to keep baby happy most of the day. At 4pm I asked him to take over so I could get some work done. He took baby, who I must say was pretty fussy. And after trying to soothe him for 10 minutes while lounging on the couch, he just gave up and let him scream his brains out on his… I can't focus when my child is screaming, so I went and grabbed him… Then I tried to hold baby… while typing to respond to my co-worker.*" [05-P102]

Similarly, this pattern of working mothers having limited boundary options increased the incidence of work-family blending and a greater degree of interruptions was also evident in the experiences of the few single-earner families where there was a remote-working parent with a stay-at-home, furloughed, or unemployed partner. Compared to when women were the non-working partner managing all relevant family responsibilities and actively trying to facilitate strict boundaries around all of their partner's work, non-working male spouses were often less collaborative in boundary scheduling and took on less responsibility to help maintain the sole-earner's work boundaries:

> "*My husband was furloughed about a week ago. When my 4-year-old's preschool originally shut down, I somehow managed to juggle homeschooling, working, and being hugely pregnant. It wasn't easy, but we at least had a system. At first I thought the furlough would be great because my husband could watch our son while I worked and I could maybe even sneak away for a pregnancy nap. How naive I was… He'll play with our son for like an hour or two and then claim he is "so tired" and sit down on the couch and zone out on his phone.*" [05-P91]

Finally, when women experienced relatively no latitude or acceptance of their intended boundaries from their spouse in the planning or implementation stages, this unsurprisingly trickled into potential options for adjustment. Working moms contemplated what kind of

changes they could make to reconcile issues with their boundary needs and constraints to provide some relief from the feeling that their current situation was unsustainable. Without completely upending the status quo of their spousal relationship, women more often had to consider making major changes to the work side of the interface. That is, the untenability of this situation forced them to think about substantive changes with their organization, despite any potential downsides acknowledged for their short- and long-term career goals (e.g., taking a leave or reduction in work hours). Remarking on these potential risks to the loss of pay, job status, future benefits, or even security of continued employment, many women still perceived these as among the only options to have even temporary relief from the disparate and profound pressure felt across the entirety of the interface—the unrelenting burden of *simultaneously* working full-time and taking on the majority of childcare with few clear boundaries.

> "*Both our jobs sometimes require that we take calls in the morning. I've neglected my job so he can do his since his is more secure than mine, even though we make almost the same. I took last week off to get the baby full time so he could work and I could have a break from my two jobs [full-time work and parenting].*" [05-P105]

Altogether, the cumulative impacts of having to exert more effort, be under these restrictive conditions that left them with less than desirable boundaries, and more often having to blending some aspect of work and family, were repercussions unduly felt by working mothers.

Boundary Work as a Dynamic Practice: The Role of Cognitive Boundary Work and its Interplay with Boundary Context

To make sense of the interrelationships between the cognitive stages of boundary work and the different factors shaping one's boundary context described above, I establish a process model that will be summarized below. The linkages proposed in the conceptual model are depicted in Figure 2 and illustrate how the intersection of cognitive boundary work and the boundary context together constitute a more comprehensive understanding of boundary phenomenon. This figure also accounts for constructs in the extant boundary management

literature, highlighting how new and existing concepts come together (e.g., boundary-laden cognition and behaviours). Altogether, this offers a novel perspective of boundary work that can be seen as a process in and of itself (versus a single, stable variable), whereby the iterative pre- to post-enactment phases are structured according to how and why goal-directed cognitions and behaviours respectively occur before, during, and after boundaries are enacted.

To explain the connections between aggregate themes and help build new theory on this dynamic process of boundary work, I incorporate extant research and theoretical perspectives. As outlined in Chapter 2, I draw inspiration from research across disciplines in the collective work-family research tradition to ascribe relevant meaning of the cognitive stages of boundary work and to generate a more cohesive understanding of contextual factors. I adopted an action regulation perspective to conceptualize the dynamic linkages between the cognitive stages of boundary work and reciprocal influences of context that are likely to unfold over time. This theoretical approach also helps frame the entire model as a motivated process by which cognitive boundary work concretizes *how* people manage to effectively enact boundaries and *why* they do so, namely, in pursuit of broader work-family goals (e.g., perform role responsibilities; Ashforth et al., 2000; Clark, 2000). This model therefore makes the cognitive inner workings of boundary work the central focus—centering physical, temporal, and psychological borders as instrumental tools to accomplishing multi-domain responsibilities.

Moreover, individuals' boundary-laden experiences and capacity to effectively manage their work-family needs do not occur in a vacuum. Building on Beckman and Stanko's (2020) relational model of boundary work, I describe how other domain members and broader social system continuously restrict and/or facilitate an individual's decision-making and agency over their boundary options. Importantly however, it is the *interplay* of these external factors that

together determine the overall impact of the boundary context and which cannot be divorced from how an individual appraises their boundary needs, plans to structure or change boundaries, and the degree of regulation required to implement and maintain their boundaries. It is also critical to note that the backdrop of this boundary context is different levels associated with the ways these external influences are borne out. More specifically, although role prescriptions of working parents are driven by the social system level, their effects emerge and operate primarily through family and couple dynamics. As such, this adds another element to understanding boundary work phenomenon, as these larger forces can shape work and family domain membership for individuals in different ways, and thus, fundamentally affects the boundaries they need to create and try to protect. Throughout the subsequent paragraphs, I describe the potential ways in which the boundary context may exert its influence at each phase of pre- to post-enactment boundary work, including the potential for the reciprocating relationship between individuals and their boundary context.

Taken together, in the proposed model working parents are seen as motivated by having to address their collective work and family responsibilities. Yet, this can pose various challenges as the needs of these roles are sometimes at odds with each other and people are often constrained by external factors and scarcity in available time or other resources. As such, working parents are more practical about how they foresee accomplishing all of their work and family duties and activities, recognizing that not all their tasks can feasibly be done separately or allocated one's sole focus.[14] People therefore consider parallel objectives to be effective and

[14] To be clear, people rarely commented on preferences for boundaries in the way they are conceptualized in the extant scholarship (i.e., as innate trait-like desires) and their goals tended to be orientated more broadly at fulfilling interrole responsibilities rather than reaching a certain level of integration or segmentation overall. Evidenced by how they focused on more practical considerations in articulating their boundary needs, such that some tasks realistically need to be done separately and be given one's sole focus to be done effectively, while others do not.

efficient in managing the work-family interface vis-à-vis the respective combination of single-domain tasking of deep tasks and cross-domain multitasking of light tasks. In doing so, with people viewed through this lens as being active agents in their own lives, they are expected to engage in a series of cognitive stages to direct and regulate lower-level goal-directed actions (i.e., effective boundary work that is all encompassing of cognition and behaviour) toward their higher-level goals (e.g., work-family balance).

Articulating and addressing these more proximal boundary-related goals subsequently involves cognitive appraisal of boundary needs and constraints for upcoming work-family tasks that becomes the basis of decision-making in boundary planning (i.e., pre-enactment), the cognitive oversight involved in implementing intended boundaries (i.e., enactment), and, processing their experiences that can be used to inform subsequent boundary adjustments (i.e., post-enactment). Further, individuals' embedment in work, family, and larger social systems cultivate a boundary context that is inextricably tied to one's evaluation of and planning for boundary needs, whether boundaries can be implemented as intended, and the scope of possible options for making changes to boundaries or whether conscious oversight is continually required. Thus, the entirety of individuals' boundary work—incorporating individual cognitions and behaviours as well as contextual influences—is represented by an ongoing and everchanging practice aimed at fulfilling work-family goals, which will be described in detail hereafter. I conclude by expounding on a critical by-product of this process: the investment of seemingly invisible cognitive effort to construct, control, and change one's work-family boundaries.

Figure 2 About Here

Prior to the enactment of any boundaries and behaviours, the outset of this process begins with a *pre-enactment* phase. In the cognitive stages of pre-enactment, people appraise their upcoming tasks as well as make plans to address their corresponding boundary needs. The practice of boundary work begins with cognitively evaluating the inherent boundary needs associated with each task in their inventory of collective work-family responsibilities. This allows people to have a clear understanding of the nature of the tasks that have to be performed in their various roles, but especially *how* they should be done according to the temporal, physical, and psychological borders required to complete the task. At the same time, people assess other relevant information about their own capacities as well as consider the boundary context they are embedded in and whether it will be facilitative or restrictive. For example, determining that participation is mandatory in all meetings can indicate the temporal boundary needs of those particular work tasks, which can in turn affect completion of other family tasks. Altogether, this tells people what actions they will have to take and what constraints they will face to execute their role responsibilities, in line with the broader work-family goals. This both motivates and prepares working parents to engage in boundary planning as a means of finding the best way to navigate the discrepancy between what boundaries are ideally needed to be effective for all tasks and the types of boundaries that are actually available to them.

Developing a fuller understanding of upcoming boundary needs then forms the basis of information to be used in planning to create boundary infrastructure. In doing so, structured boundary planning involves engaging in a decision-making process of identifying, assessing, and selecting boundary alternatives that prioritize and fit together different tasks' needs and pre-emptively manage any boundary-laden challenges that may arise. More precisely, people deliberately contemplate potential configurations of temporal, physical, and psychological

boundaries that would be beneficial to fulfilling all of their work-family responsibilities while at the same time working within the confines of what their boundary context will allow. They therefore consider the potential trade-offs in using a combination of weaker and stronger boundaries via periods of cross-domain multitasking and single-domain tasking, respectively. Working parents who are able to structure their boundaries should ultimately be able to design an idiosyncratic boundary schedule that provides a concrete path forward to enact specific boundaries—clearly stipulating when, where, and how they will handle various periods for work and/or family tasks (as done together or separately) throughout the day/week.

Subsequently, in the *enactment* phase of boundary work, people implement boundaries with the intent of performing necessary duties in support of related work-family goals. However, in addition to the behavioural aspects of boundary implementation emphasized in the extant literature (Allen et al., 2014), cognitions are also present and work in concert with behaviours to facilitate goal progress. That is, to be effective in the actual enactment of any boundaries, working parents have to be intentional about adhering to what is set out by any pre-enactment appraisals and planning, or for unstructured planners who might create boundaries on the fly (if at all). This also involves monitoring one's own capacity to stay in the appropriate role(s) and/or override disruptions and re-establish boundaries, thus requiring more psychological resources (e.g., energy, attention; Fiske & Taylor, 2017). Notably, behaviourally implementing boundaries obliges individuals' regulation and control for two main reasons. First, due to individual factors and internal distractions (e.g., (mis)alignment in necessary energy/attention), this can require mental effort to ensure one stays in a particular place and be fully engaged in the correct "mode" as an employee and/or parent for a set amount of time. Second, boundary enactment can also be affected by external factors in the individuals' immediate context where boundaries are meant to

be implemented, such as disruptions stemming from others in the shared environment. Therefore, people are motivated to reduce the gap between current boundaries (e.g., a diversion from where/when/how they are supposed to be doing work and/or family roles) and intended boundary states (e.g., finding a state of "flow"), by managing their internal states (e.g., off-task thoughts).

The final stage of cognitive boundary work occurs in the *post-enactment* phase and illuminates the dynamic nature of boundary work as being a cyclical practice. In this stage, working parents try making sense of their multifaceted boundary-laden experiences and this feeds back into how they can enhance boundary implementation. Remote working parents' experiences with enacting boundaries provides feedback about whether their prior boundary work allows them to be an engaged parent while also maintaining the ability to accomplish job-related tasks (i.e., to meet their work-family goals) in light of any challenges they face. In addition, people consider other potential consequences of their work-family boundaries for their broader needs and goals (e.g., for well-being, nonwork-nonfamily interests), providing some indication of the sustainability of their approach over time and the ways it can continue to be refined. Individuals' motivation and agency to evolve their boundaries consequently tends to be based on the identification of how their actual boundary work fell short of a more idyllic version of their boundaries that would in theory help them to craft and achieve work-family and/or personal goals. Yet, similarly to other phases of boundary work, actuating change to boundary needs, planning, and/or implementation are still likely to be restricted by one's boundary context, such as when organizational or family members are not accepting of proposed adjustments. Interestingly, it is at this point where the bi-directional relationship with the boundary context becomes the most salient; individuals can have a reciprocal influence on the boundary context they are embedded in by attempting to change any such barriers. To illustrate, working mothers

actively tried to alter their spousal dynamics with caregiving responsibilities in effort to obtain access to stronger boundaries and more capacity for deep work. Altogether, these final elements of cognitive processing provides valuable information about one's boundary needs and planning, in turn informing adjustments to subsequent boundary work and motivates the re-direction of a return to pre-enactment stages (represented by a feedback loop in Figure 2).

In sum, these interconnected cognitive stages together serve a critical purpose as the mechanism by which people articulate and pursue salient goals, particularly as the complexity of one's boundary needs rise. Cognitive boundary work facilitates the effective construction and implementation boundaries as a proximal goal in the progression toward higher-level goals such as performance of one's work and family responsibilities and being able to balance the interface (Clark, 2000) or individual needs (de Bloom et al., 2020). Notwithstanding these clear benefits of boundaries for goal attainment, this model also sheds light on the concealed cognitive *effort* involved in intentional and successful boundary work. While the enactment stage involving regulation should unsurprisingly require psychological resources (Fiske & Taylor, 2017), the mental load of boundary work also extends to pre-enactment appraisals and planning as well as post-enactment processing and applications of such feedback (e.g., Daminger, 2019). The final elements of cognitive processing associated with boundary adaptation also elucidates the continuation of, and potential shifts in, mental effort needed over time. Based on dual-process systems acknowledged by the action regulation lens, as people make fewer changes to their boundaries and perhaps reach an effective and predictable practice of boundary work that they are satisfied with, less mental effort should be required to maintain and execute one's boundaries through controlled processing. In other words, the habitual use of an established boundary infrastructure allows them to enter a more automatic level of processing and should require less

cognitive labour. Finally, these efforts are augmented when individual's intended boundaries are not accepted by family or organizational members and/or misalign with social role prescriptions, requiring additional mental energy directed to constructing, controlling, or changing boundaries.

Applications of the Proposed Model

This overarching model of individual boundary work accounts for the thoughtful and motivated process of constructing, controlling, and changing one's own boundaries according to a person's specific needs and context. Although this has come to light under more unique circumstances by which work-family management has been greatly intensified (i.e., due to the shift to remote work and children being home full-time; a lack of typical resources to support families' needs), cognitive boundary work is unlikely to "disappear" at the conclusion of the pandemic or in seemingly returning to "normal" (e.g., where children are in daycare/school). In fact, there is an expectation that the pandemic has irrevocably changed work and family life and the boundaries between them, such as how many people are going to permanently maintain some proportion of their job hours spent working from home (Castrillon, 2020). Further and in addition to these trends, I would argue that cognitive boundary work has always been present in boundary enactment to some degree—albeit probably more subtly for some. Similar to that of the mental load or cognitive dimension of household labour that was always a part of managing one's home and family (e.g., Daminger, 2019; Robertson et al., 2019), and which was written about before the pandemic. Consequently, I propose that engagement in cognitive boundary work is likely resonant of many contemporary working parents' experiences with work-family and the boundaries between them and may also apply to a range of other contexts and samples that have rarely been considered. I outline these many potential applications and new avenues for boundary research in the remainder of this section.

First, for subsets of the population who begin in fundamentally boundaryless work-family environments, cognitive boundary work can serve as an important tool in constructing and changing boundaries effectively. Going to a workplace naturally helps to organize work and nonwork by creating lines to signify distinct expectations within and across these domains, but without these elements of structure it can become difficult to perform one's various role responsibilities effectively, and thus, to achieve or sustain work-family goals. A lack of work-related boundary structures that inherently dictate some basic delineation of the interface therefore necessitate some degree of planning, monitoring, and feedback to create and oversee boundaries that indicate where, when, and how work and family roles should take place. As a result, this development in boundary dynamics may just now be able to explain more about the experiences of people in occupations where there has always been less of a boundary structure baked into the job. For example, those who do not have a formal workplace or typical hours of work they must adhere to (e.g., real estate agents; small business owners or entrepreneurs; academic faculty). This is also especially useful as the nature of work is changing in the twenty-first century (Barley et al., 2017). A practice of boundary work can be critical for many types of remote workers—all of whom have to design and manage some portion of their boundaries. This may be employees with or without family members at home and extends to those who work at other places outside a central worksite (e.g., co-working offices; salespeople who go "on the road"), whereby many jobs are moving to be performed remotely (e.g., call center employees) and people are increasingly joining the "gig economy" (e.g., rideshare drivers; freelancers).

Moreover, a lack of boundary structure may stem from trends on the family side of the interface. In the North American context, the number of multigenerational households are growing; more family members are living together (e.g., adult children staying at home longer;

Pilkauskas et al., 2020) and a greater number of people are relying on their family for help with caregiving. For instance, rising eldercare needs in light of the increasingly steep costs of living (and healthcare costs in the United States) means many family members will have to take on these responsibilities either by having a family member move into their home or by regularly going to provide care at another location (Casper et al., 2016). In addition, parents of young children are having to rely more on family members (e.g., grandparents who may still be working) due to the crisis in safe and economical childcare options (Cooney, 2021); for school-aged children, balancing work and family needs becomes more of a consideration when children are out of school. This also relates to groups of employees whose child(ren) have additional needs (Brennan et al., 2016). One example of this comes with homeschooling becoming an progressively popular option and as of last year approximately 3.7 million American families fell into the category of being primarily responsible for educating their children (this does not include those enrolled in a school but temporarily learning by virtual means; National Home Education Research Institute, 2022). This leaves a considerable proportion of working parents to engage in regular boundary work to balance the needs of child(ren)'s schooling and their own jobs because approximately one quarter of these families have all parents from the household working in the labour force (across one- and two-parent households; Grady, 2017). Altogether, these many different scenarios elucidate the family dynamics that tend to push work and family together and may present challenges with boundaries that require cognitive boundary work.

Second, this could also be applied to the study of experiences through major changes in "macro" boundary structures. That is, similar to how this study focused on the liminal period when employees started working from home and/or had more family members at home throughout the workday, shifting them into a largely blended work-nonwork space compelled

many remote working parents to engage in cognitive boundary work. More broadly, cognitive boundary work may systematically differ across the lifespan where various milestones or major life events create these shifts in work and family (Crawford et al., 2019) and the boundaries surrounding them as well. To provide one illustrative example, this may involve the intentional and unintentional changes to boundaries prior to, during, and after the birth of a child. The birth of a first child is documented as profoundly changing a working parent's, and in particular a working *mother's*, life (Schulte, 2015), and thus with a change in their corresponding boundary needs this can require cognitive boundary work to establish and manage new boundaries. This is particularly salient in the United States with the limited amount legislated parental leave (i.e., the Family Medical Leave Act) that may strand parents with infant children who have to return to work but struggle to find childcare. This was evident in the experiences of new parents who recently had children that were home with them even as they transitioned back to work remotely; they found it challenging to manage their boundaries and create periods for deep work amidst continuous childcare needs. The implications of this, especially during these liminal experiences constructing new boundary structures and/or being in the kind of environment that requires having to move across boundaries more frequently, are that this boundary work involves more controlled and effortful cognitive processing. With this in mind, we can begin to understand how cognitive boundary work unfolds and evolves at different time intervals (i.e., longitudinally, episodically, daily), which have rarely been acknowledged in extant boundary scholarship due to the stable nature conceptualized into boundary management constructs.

Third, cognitive boundary work and the whole dynamic process model could be expanded to other parts of the work-nonwork interface that were not considered due to the scope of this dissertation. Despite being focused on the boundaries at the interface between work and

family because these were the most pressing role responsibilities for most people in my research context, there is another unacknowledged yet significant aspect of nonwork life to be considered: the "personal life". There were a few references to this in the qualitative data with respect to people wanting to create some isolated time for nonwork-nonfamily activities. As such, shifting into a three-domain conceptualization of the interface (Wilson & Baumann, 2015)—an emerging area of work-family scholarship—could have significant theoretical and practical implications for our scholarly understanding of boundary management that we could unpack through cognitive boundary work. This may in fact be a more accurate reflection of the complicated realities most contemporary employees who are trying to negotiate a balance between work, family, and their personal life. Doing so could also broaden the scope of people for whom boundaries have been and should be studied. Namely, boundary work may also extend to the nexus of work and the personal life domain specifically, such as for those who are single and/or childfree—a growing demographic group of contemporary employees (Boiarintseva et al., 2021). There is some evidence this group similarly struggles to maintain psychological boundaries at work (Dumas & Perry Smith, 2018) and who may devote more energy to creating and implement time solely meant for the personal life activities they are passionate about and/or prioritizing important friendships (Craig & Kuykendall, 2019).

Further, this may be of particular interest for those scholars wanting to study couples without children and/or dual-earner remote working couples who still have to establish some semblance of boundaries and exert effort to maintain work boundaries within their home or to support their marital relationship. Work-family scholarship as a whole has tended to focus its efforts on the more traditional nuclear family and naturally focuses respondents' attention on necessary childcare duties (Shen & Shockley, 2021), but the meaning of family and nonwork life

has been changing in recent decades (Bianchi & Milkie, 2010). Likewise, I observed that people differentiate between boundaries required for children's needs (a substantial focus of these samples) versus for their spousal relationship or even household duties, which to date would have all been collapsed under the "family" domain. Instead of compromising these when parents are facing intense time scarcity, couples may too want to create stronger boundaries around time just for their relationship outside of childcare obligations. In fact, marriage and family research would suggest it is critical for the quality of couples' relationships that they prioritize quality time just for them (Gottman & Notarius, 2000), and we may therefore want to understand more about these couple-specific boundaries or lack thereof. Taking boundaries down to the task level through cognitive boundary work therefore provides key opportunities to add nuance to the study of boundary dynamics *within* domains that can have consequences for adjacent domains.

Finally, this could shed additional light on the gaps in certain groups' access to boundaries as well as the effort exerted in the process of boundary work. I described how the work-family boundary structure was different between working mothers and fathers, but it was also clear that women in these samples were not able to have isolated time for personal life activities. Women are known to spend fewer hours on personal life activities and which are more likely to be overlapped with family time compared to men, and this asymmetry often becomes more pronounced after the birth of a first child (Dush et al., 2018). This means women do not get the same isolated time or strong boundaries for deep personal life engagement (Saxbe et al., 2011), that are known to have a host of work and nonwork benefits (Brown, 2009; Calderwood et al., 2020). Yet in spite of boundary structures being imbalanced, they may just be one of the key paths forward toward gender equality within couples and especially dual-earner couples (Schulte, 2015); by equitably creating *and* enforcing work-family boundaries, both partners and

their children may be better off. This is clear in the experiences of Scandinavian families who are among the most balanced in sharing childcare and household duties, have equal access to deep work time, and engagement in personal life activities (Craig & Mullan, 2011; Bonke & Jensen, 2012). And this is also the reason why organizations such as the ThirdPath Institute—which helps families redesign their work-family lives in a way that has couples equitably integrating their roles—exist in North America. Thus, we can unpack the cognitive processes that lead couples to the point where there is an imbalance in stronger boundaries for work, family, and the personal life. This also sets the stage for a way to intervene, namely, where to disrupt these thought processes and provide a template to reimagine work-nonwork boundaries.

Taken together, cognitive boundary work and its prominent role in this overarching process of individual boundary work could be generalized to several different groups of contemporary employees and experiences that I have discussed. This prompts new avenues of study with respect to an expansion of samples and contexts that boundary management research may be applied. Most importantly, shining a light on the cognitive nature of boundary work generates new knowledge about an important phenomenon which can offer several new insights for the field, and notably, for a substantial number of individuals and families that have been and will continue to be navigating the complex intersection of work and nonwork.

CHAPTER 4

Overview of Objectives

The purpose of this chapter is to further develop the newly discovered *cognitive boundary work* construct, which I posit serves as the mechanism by which people articulate and pursue their holistic work-family goals. Understanding the cognitive side of boundary work offers complementary insights to the vast majority of previous studies that have focused on the behaviours associated with boundary enactment. This is important because cognitions often surround overt actions (e.g., decision-making before and after boundaries are implemented) and/or can go hand-in-hand with overt actions (e.g., regulation during boundary implementation). This suggests that individuals' boundary management experiences may involve more than just their behaviours or innate preferences that have been studied in existing literature. Accordingly, the newly developed construct of cognitive boundary work stands to shed light on new elements of boundary-laden phenomena that had previously been overlooked. In relation to the extant literature, unpacking these cognitive stages exposes more of the inner workings of individual boundary work. This elucidates how and why people construct, control, and change their boundaries in particular ways as well as the potential challenges they face at various stages of this ongoing process. Consequently, the aims of the subsequent studies are three-fold.

First, I aim to establish the linkages between the four stages of cognitive boundary work as proposed in the conceptual model from Study 1 (see p. 63) that will lend further support for the overall nature of cognitive boundary work. Second, I aim to examine how cognitive boundary work relates to existing boundary constructs, and in so doing, demonstrate the unique role of cognitive boundary work for boundary management. Finally, based on the qualitative findings and by drawing on the existing literature and theory, I develop hypotheses regarding the

antecedents and outcomes of cognitive boundary work, which will further underscore the relative importance of this construct for this literature. To reach these objectives, I conduct a series of studies to develop and validate a self-report instrument of cognitive boundary work and then use this to establish the nomological net of cognitive boundary work.

Cognitive Boundary Work and Other Boundary Constructs

I first explicate the potential relationships between cognitive boundary work and existing boundary management constructs, which is a crucial aspect of construct validity (Campbell & Fiske, 1959; Hinkin, 1998). In particular, establishing convergent and discriminant validity provides an indication that the scale associated with the construct of interest relates to other similar measures of concepts that it should be associated with and has weak or no relationship with measures of conceptually distinguishable constructs, respectively. Since I introduce the concept of cognitive boundary work in this dissertation and there are no other scales that explicitly measure the cognitive elements of boundary management, I focus on relationships with the most established boundary management constructs (i.e., integration-segmentation preferences and behaviours; border characteristics). First, global boundary-laden tendencies focused on the enactment of boundaries should differ from cognitive boundary work which is conceptualized as the mental efforts applied to construct, control, and change boundaries in responses to one's ongoing work-family needs and circumstances. This is also supported by the action regulation lens that suggests cognitive processes both inform and work in concert with goal-relevant behaviours, but ultimately are uniquely important aspects of goal pursuit. Second, because Clark's (2000) border theory defines two attributes of borders—flexibility and permeability—that are meant to indicate where an individual ultimately falls on the integration-segmentation continuum. Boundary flexibility and permeability describe what the resultant boundaries are like,

and while they may come into one's thought processes involved in boundary work they do not speak to the agentic cognitive efforts people make to construct, control, and change their boundaries. As such, I argue that these are conceptually different, and I therefore expect that cognitive boundary work should only be weakly correlated with these boundary variables because they reflect different aspects of boundary-laden experiences.

Hypotheses Development

Based on the theoretical grounding of my qualitative findings and how I ultimately conceptualized cognitive boundary work (see pp. 63 or Table 1) in the larger process shown in Figure 2, I maintain an action regulation perspective (e.g., Zacher, 2017) to explain why cognitive boundary work occurs as well as how cognitive boundary work helps people to reach important goals. Before developing the subsequent hypotheses, I provide a brief review of the relevant tenets of an action regulation framework that were previously described in Chapter 2. The action regulation perspective is based on an overarching belief that people are motivated to use their agency to actively pursue personally important goals. Notably, this perspective distinguishes between goals at different levels but that work in tandem, such as how effective boundaries—vis-à-vis cognitive boundary work—would be lower-level goals that support higher-level work-family goals (e.g., balancing work and family, fulfilling work and family responsibilities, etc.). The action regulation perspective further posits that people regulate their goal-directed behaviours through cognitive processes that account for one's individual needs and abilities as well as potential constraints or barriers stemming from personal factors and/or their environment (Zacher, 2017). In addition, these goal-directed processes are viewed as ongoing pursuits rather than as a means to an end, where people tend to identify, pursue, and revise goals continuously rather than reaching a point and ceasing all goal-relevant thoughts and actions.

Thus, based on a combination of these insights gleaned from the qualitative findings, extant work-family scholarship, and by taking the action regulation perspective, I put forth several hypotheses exploring antecedents that determine one's motivation for and propensity to engage in cognitive boundary work as well as the downstream consequences of cognitive boundary work. The hypothesized model can be found in Figure 3.

Figure 3 About Here

Antecedents of Cognitive Boundary Work

Action regulation theory suggests that individual factors (e.g., traits, needs) are among the first to influence one's ability and motivation to engage in the process of identifying and selecting goals, appraisals and planning, regulation, and feedback seeking and processing. Therefore, I first examine proactive personality to understand who is more likely to be motivated to engage in these core elements of cognitive boundary work. Given the nature of cognitive boundary work relies on individuals being actively involved in the pursuit of work-family goals, I expect that an individual's natural predisposition toward being proactive will enhance the likelihood they are attuned to the need for cognitive boundary work as well as have the capacity to do so. Proactive personality is defined as an individual being "empowered to take personal initiative to ensure a positive outcome in whatever environment that person occupies" (Cunningham & De La Rosa, 2008, p. 271). In other words, more proactive individuals are constantly aware of their environment and are more likely to take action to better address their needs particularly when these pertain to meaningful roles, whereas lower levels of proactivity result in people who passively react to and engage with their environments rather than trying to

take control over it (Bateman & Crant, 1993). Limited work-family scholarship has adopted this dispositional variable, though, a few studies have focused on and found support for how these people may be more likely to anticipate and/or pre-emptively mitigate work-family conflicts before they arise (Allen et al., 2012). Thus, because cognitive boundary work is a phenomenon that can itself be considered proactive in terms of people using their agency to better serve broader work-family goals (e.g., making plans to handle upcoming boundary needs and constraints), this should ultimately be enhanced by one's natural inclination for proactivity.

Hypothesis 1: Proactive personality will be positively related to cognitive boundary work.

I also examine how another individual attribute, i.e., having a whole life perspective, will motivate people to engage in cognitive boundary work to implement effective boundaries as a means of reaching overarching work-family goals. An individual holds a whole life perspective when they wish to be effective and seek satisfaction in multiple domains of life, instead of solely or disproportionately in work or family (DiRenzo et al., 2015) and has been associated with greater work-life balance (Briscoe et al., 2006). Importantly, this suggests people make more interconnected decisions about their various life domains, such that choices about one domain are made with a conscious awareness of the impacts they may have on the other roles in their life. As a result, people view balancing work and family as imperative to career success rather than as a detriment to it, for example. Consequently, I expect the adoption of a whole life perspective will influence the higher-level work-family goals one pursues since they hold dual work and family roles as equally important. In doing so, this impacts the extent cognitive boundary work is needed to serve proximal goals of having effective boundaries as these individuals are then willing to exert mental energies on these dual-centric decision-making

processes. Being orientated towards multiple domains whose goals must be proportionally accounted for but at the same time might be in conflict can provoke challenges to meeting all of these simultaneous needs as both are meant to be prioritized. However, boundaries fundamentally help to provide a structure that helps people navigate the sometimes-at-odds expectations of their work and family domains, which is why I expect that this will drive one's engagement in cognitive boundary work (e.g., engage in planning to fit together work and family roles in a way that satisfies both, etc.). On the other hand, having more of a focus on a singular part of life (i.e., a low degree of whole life perspective) should mean there is not as much coinciding pressure to consider and plan how to balance another a less coveted domain's needs. The necessity of effort directed toward well thought out and designed boundaries should consequently increase as dually important work-family goals are considered.

Hypothesis 2: A whole life perspective will positively relate to cognitive boundary work.

In addition to individual traits that give rise to one's motivation to do boundary work, cognitive boundary work may also be driven by more pragmatic reasons. That is, working parents are likely to have broader goals along the lines of being a good employee and parent, but then must find a way to perform these roles effectively under the weight of collectively high demands. People should therefore be motivated to engage in cognitive boundary work by the magnitude of responsibilities they must perform across work and family. While increasing work-family demands amplifies the chances that the inherent needs of work and family tasks will be overlapping, creating and implementing boundaries helps to organize and structure multiple role expectations in a way that can help to mitigate those conflicts and still allow people to perform. For example, working remotely while providing full-time childcare heightens demands in a way

that may force an individual to appraise specific needs of each task and strategically make trade-offs in their schedule for highly focused time being devoted to the most important and cognitively-demanding tasks while cross-domain multitasking other duties due to time scarcity and other constraints. Both objective and subjective measures of role demands suggest that these increasingly require individuals to be diligent with work-family management in order to avoid a detrimental level of conflict and to maintain a certain level of role performance (Byron, 2005; Michel et al., 2011). While these demands are often considered in isolation (i.e., associated with a single domain), when taken together this may offer better insight into why the collective level of demands one faces can in and of itself be a driving factor in the increase of effort directed towards intentionally anticipating, planning, regulating, and adjusting boundaries at the interface. Thus, when looking at the person as a whole and aggregated interrole responsibilities become more overwhelming (Rothbard & Ollier-Malaterre, 2016), people will be driven to engage in cognitive boundary work as tool to manage and fulfill salient work-family demands.

Hypothesis 3: Total perceived work-family demands will positively relate to cognitive boundary work.

Relatedly, I expect factors that drive the essentiality of some tasks can make demands collectively more difficult to deal with and can ultimately increase engagement in cognitive boundary work to combat these challenges to fulfilling holistic work-family goals. In particular, when elements of one's demands are "non-negotiable" and/or have stringent constraints embedded in when and how the corresponding tasks must be done, people are left with fewer options to manage the work-family interface overall. As a result, they might have to be more thoughtful and resourceful about arranging and performing their various role responsibilities. This builds on patterns evident in the qualitative findings that showed the ages of children were

key determinants of how much working parents had to engage in cognitive boundary work to manage the seemingly never-ending and overlapping work and family demands. Indeed, past research in the extant work-family literature has shown that the ages of one's children are associated with greater interrole conflicts (Byron, 2005; Eby et al., 2000). Naturally, when children are younger they rely more heavily on their parents to satisfy their most basic needs (e.g., feeding) and require almost constant supervision, whereas as children get older they are able to manage more of their own fundamental needs and the necessity of their parent's help lessens. Also, as children develop, they are more able to regulate themselves and are less likely to become a distraction or violate the boundaries their parents may be trying to implement. To illustrate, having a toddler who needs their meals made and fed, substantial supervision, and does not understand if the parent they *want* (and not the one that is available) is in a meeting, is much harder to schedule and perform deep work around than a teenager who can largely care for and occupy themselves. Therefore, I focus on the degree to which children having essential needs can motivate working parents to engage in strategic and continuous planning as well as more diligently regulate their boundaries.

Hypothesis 4: Age of the youngest child will negatively relate to cognitive boundary work.

Lastly, I generate hypotheses to examine when people are more likely to do cognitive boundary work based on other forces that I observed shape the boundary context. As described in the qualitative findings, one's boundary context can impact individuals' agency over boundary-laden decision-making and need for regulation, therefore increasing the necessity of cognitive boundary work to still reach broader work-family goals. In other words, people have to take into account this contextual information as it will affect if and how they can attain their higher-level

goals and do so through the process of cognitive boundary work (e.g., appraisals and planning to manage various constraints).

Individuals are embedded in broader work and family domains, which makes their decisions about work and family borders in part dictated by external influences, like whether they are able to be flexible (Clark, 2000; Matthews et al., 2010). Just as Beckman and Stanko (2020) found boundaries tending to be continuously co-created with one's spouse and supervisor, these other domain members can constrain the boundaries people want to implement. This then leaves people to find more creative ways—vis-à-vis cognitive boundary work—to get everything done. For instance, managers demonstrating greater boundary acceptance may choose to allow employees to handle children's needs throughout the conventional workday and then make up work during other hours as they see fit. Employees then do not have to negotiate boundaries back and forth with their managers on a regular basis and they do not have to explore multiple alternative boundary schedules, resulting simpler and less cognitive boundary work. On the contrary, managers demonstrating less boundary acceptance may force employees to perform work following conventionally fixed schedules and leaves employees to figure out alternative plans to fulfill their parental responsibilities while working. Likewise with one's spouse, those who choose to be more accommodating should require less mental efforts in cognitive boundary work. As such, other domain members can continuously impact the scope of choices an individual has in planning for or changing boundaries as well as the level of monitoring required over whatever boundaries they are trying to implement. Therefore, I propose that the need for these thought processes is intricately connected to the extent that key family and work domain members accept the boundaries an individual intends to put in place.

Hypothesis 5: Boundary acceptance stemming from (a) spouses and (b) supervisors will negatively relate to cognitive boundary work.

Next, I incorporate the influence of broader social systems to explain how certain groups of people may have more or less access to the boundaries they want to implement. Specifically, I propose that gender plays a role in cognitive boundary work. As observed in my qualitative findings, a differential need for and experience with cognitive boundary work was driven by systematic differences in the social role expectations associated with being a working mother or father. To be clear, I do focus on heterosexual partners here; adherence to these more traditional social roles associated with being a working mother and father polarizes these partners' experiences in a way that tends not to happen for same-sex couples (Rothblum, 2017). Although this has not been widely studied in boundary scholarship to date, the gendered nature of work and family life have been studied more broadly and undoubtedly fosters unique experiences for working mothers and fathers (Shockley et al., 2017, 2021). This is especially salient when it comes to the cognitive dimensions of household labour, which go well beyond the mere completion of physical tasks and tend to be disproportionately managed by women (Daminger, 2019). Ultimately, it is the normative assumptions about men's identities centering around work and their careers while women are supposed to be focused on family and caregiving (Eagly & Wood, 2011) that can translate to expectations for the boundaries around these distinct domains (i.e., how people are supposed to engage in those roles and execute their duties accordingly).

Norms around gender not only shape what roles people are expected to perform, but individuals' embedment in these social systems dictates prescriptions and proscriptions that can have the effect of polarizing expectations of men and women with respect to their membership in and relationships between work and family domains. This means that despite dual-earner couples

being made up of two individuals that both have work and family roles, I expect working mothers are more likely to face obstacles in actually constructing, controlling, and changing boundaries, in particular when it comes to stronger boundaries around work. At the same time opposing societal expectations of working fathers grant them the ability to protect their work borders and permit weaker family borders as well as to have nonwork-nonfamily time. Put simply, because family responsibilities are allowed to be a choice for men in a way they are not for women (Connelly & Kongar, 2017), this has a ripple effect on the boundaries women and men are able to create around work and family. This is evident in the onerous demands placed on working mothers who do more labour collectively across interface but at the same time more limited options to fulfill these responsibilities that leaves them engaging in substantially more work-family blending. In turn this requires more regulation to straddle simultaneous yet largely conflicting expectations of both "employee" and "mother" roles, and can inhibit performance (e.g., Schulte, 2015). As such, this motivates working mothers to engage in cognitive boundary work in attempts to set up better boundaries and are likely to take on some of this labour for their family members as a way to protect some of their own boundaries.

Hypothesis 6: Gender will be related to cognitive boundary work, such that women will engage in more cognitive boundary work than men.

Outcomes of Cognitive Boundary Work

Based on action regulation theory, the cognitive processes associated with boundary work are proximal goal-directed actions that should facilitate the effective use of boundaries in the course of attaining higher-level goals for the interface. Given that work and family are often among the most salient parts of people's lives (Ramarajan & Reid, 2013), people are typically motivated to perform these roles well and create homeostasis between them. According to

Clark's (2000) border theory, boundaries first and foremost clarify role expectations and create a path to organize the interface, which are necessary elements of work-family management that enable people to balance and satisfy their various responsibilities. Thus, in developing the following hypotheses, I theorize that cognitive boundary work is a crucial steppingstone in how people concretize the fulfillment of their work-family and personal goals.

I first hypothesize that one's effectiveness in attaining work-family balance to be enhanced by engagement in cognitive boundary work. I refer to balance as an individual's own appraisal of effectiveness in and satisfaction with how they manage their work and family lives (Carlson et al., 2009; Valcour, 2007). Similar to how work-family balance scholarship tends to view interrole phenomenon from the perspective that people think about, structure, and assess the interface as a whole (Grzywacz & Carlson, 2007; Voydanoff, 2005), cognitive boundary work inherently relates to how the person cognitively manages work and family domains holistically. That is, cognitive boundary work inherently places an emphasis on keeping all higher-level goals in balance (e.g., anticipates boundary needs for both, makes plans to fit together work and family role responsibilities accordingly). Although previous research has mainly studied boundary management preferences and behaviours or border flexibility and permeability, there is baseline evidence to suggest boundaries do promote a sense of balance (e.g., Bulger et al., 2007). As such, carefully creating, controlling, and changing boundaries should result in people being able to cultivate greater work-family balance effectiveness—making cognitive boundary work a critical mechanism to reaching this overarching work-family goal. I consequently propose more mental effort directed to this practice which aims to establish useful boundaries should also increase one's perceived balance across work and family.

Hypothesis 7: Cognitive boundary work will be positively related to work-family balance effectiveness.

Likewise, another higher-level goal of any boundary work is to be able to actually engage in and accomplish important duties in work and family roles, such that performance of one's responsibilities is deemed a necessary component of "success" in navigating the work-family interface (Ashforth et al., 2000). Given time and external constraints on how one intends to manage the interface, cognitive boundary work allows people to most effectively perform deep tasks on their own as well as efficiently combine lighter work and family tasks to ensure one's entire inventory of responsibilities are taken care of. More specifically, this occurs through the effective appraisal of boundary needs for one's collective work and family tasks as well as effective planning in creating a schedule that will foster engagement and productivity, ensuring one's own capacity to think and act according to their intended boundaries, and learning from these experiences to make any changes that will enhance performance of work and family duties in the future. Altogether, engagement in these aspects of cognitive boundary work should serve as a critical tool for facilitating goal-orientated action that will maximize role performance in both domains.

Hypothesis 8: Cognitive boundary work will be positively related to performance in (a) family and (b) work domains.

Lastly, albeit my focus has largely been on work-family outcomes, I propose that cognitive boundary work can also extend to help improve individuals' overall well-being. This is because creating and managing work-family boundaries fundamentally serves to establish a system to organize distinct domains that can satisfy important personal and work-family goals in an individual's life. As previously discussed, cognitive boundary work should make people more

effective at performing various work and family duties as well as more efficient in managing the interface of roles as a whole.

What is more, cognitive boundary work also stands to fulfill basic human needs and reduce stress associated with navigating the work-family interface. Human beings are driven to understand the world around them and have an intrinsic need to reduce uncertainty in all facets of life (Kruglanski & Orehek, 2012). Through cognitive boundary work, people appraise their inventory of upcoming work-family task needs and pre-emptively lay out a detailed plan to have boundaries help meet those needs. This reduces uncertainty and provides clarity in understanding and structuring the complex relationships between important roles. Therefore, the effort applied to cognitive boundary work should make clear what is expected within each work and family domain and takes the guesswork out of how to best traverse the connections between them in terms of the physical, temporal, and psychological lines. This can be particularly helpful for working parents with young and/or multiple children, as they are among the most stressed and burnt-out cohort of people in North America (Bianchi et al., 2006; Schulte, 2015). In sum, the implication of cognitive boundary work is thus two-fold for well-being: it enables effective work-family management which satisfies central goals in individuals' lives as well as reduces uncertainty and stress levels associated with this process generally.

Hypothesis 9: Cognitive boundary work will be positively related to overall well-being.

Overview of Studies

Item Creation

First, using concrete examples from reference quotes in the qualitative study, I generated a comprehensive pool of 65 items to represent the four stages of cognitive boundary work.

Subsequently, I sought feedback from other scholars (i.e., advisor, faculty, graduate students) on the readability of these items and to determine if on their face the items represent the definitions of the four concepts derived from Study 1 (see Table 1). Based on seven responses, I revised the list of items either by complete deletion or by re-phrasing to improve clarity and better align with the definition. A total of 27 items for the cognitive boundary work scale were left to be tested in follow-up studies (see Appendices C-E for the list of items tested).[15] The aim throughout the scale development process was to refine the items further and derive subscales made up of four to six of the best items (Hinkin, 1998).

Establishing Psychometric Properties, Construct Validity, and the Nomological Network

Using this pool of 27 items, a key goal of Study 2 was to ascertain the psychometric properties of the scale by demonstrating the preliminary factor structure among the four subscales and to refine the scale items as needed. In addition, I tested for significant correlations between cognitive boundary work and other interrole and boundary constructs that are commonly used in the literature to provide evidence for discriminant validity (Cronbach & Meehl, 1955) as well as for method effects with potential confound variables (Podsakoff et al., 2003; Williams & Anderson, 1994). Next, in Studies 3 and 4, I confirmed and replicated the factor structure of the cognitive boundary work construct and began testing the hypothesized relationships. In doing so, this also helped to establish criterion-related validity with important outcome variables, and I further examined whether these relationships were present over and above other similar boundary management scales (i.e., incremental validity).

Study 2 Method

Participants and Procedure

[15] These studies were part of the project entitled, "Developing a Dynamic Process Model of Cognitive Boundary Work", which received ethical approval by Wilfrid Laurier's Research Ethics Board (#7130).

I planned to recruit 200 individuals to complete an online survey using the crowdsourcing platform, Prolific (Palan & Schitter, 2018), and received 168 responses from a limited pool of available participants.[16] For inclusion in the study individuals had to meet several criteria: currently be employed working 20 or more hours per week, be working all of their regular work hours from home, and be cohabitating with at least one of their child(ren). People were also recruited specifically from regions that experienced closures due to COVID-19 in the previous four months (i.e., Canadian provinces and several Northeastern states) whereby many working parents were again working with children doing school remotely and/or unable to utilize daycare services. I conducted the initial study testing these items with these specific criteria because it was similar in nature to the characteristics of the Study 1 samples where I first observed this phenomenon, making these cognitive boundary work experiences more salient in one's thought processes around navigating their work-family responsibilities.

Participants completed a 20-minute survey including demographic questions, the cognitive boundary work scale, measures of related boundary constructs, and a measure of trait affectivity that would allow me to estimate confounding method effects and ensure cognitive boundary work differs from these variables.[17] Participants who failed to correctly answer at least two attention check items out of three (e.g., "Please respond with strongly disagree") based on current best practices in this literature (Varty et al., 2021; Wayne et al., 2019) were excluded from the analyses due to the potential for careless responses (Huang et al., 2012; Meade & Craig,

[16] Prolific.co is an online recruitment platform (Walter et al., 2019) developed by academic researchers. I chose to use this platform over other alternatives because it is the most user-friendly interface for conducting academic research, and most importantly, it has a higher standard of data quality mechanisms already in place (e.g., internal checks on participant accounts to ensure participant trustworthiness) and participants tend to be less experienced survey-takers (Peer et al., 2017). However, I also built in a number of quality control checks, such as using comprehensive screening procedures and attention check questions.

[17] Participants were paid between 2.25-2.50 GBP for completion of the survey, which equated to approximately $3.70-4.10 CAD at the time of data collection in March 2022.

2012). Based on this criterion and those who fully completed the surveys, my analyses were based on responses from a sample of 159 participants.

Demographic characteristics of the final sample was 50% female and had a mean age of 40.17 years old (*SD* = 7.38; range 24-59 years). Most of the sample was White (76%), 16% Asian, 6% were Black, and the remaining few individuals were Latinx or Indigenous. Of those participants who were currently in a common law relationship or married (88%), the majority were dual-earner couples (80%). It was a requirement that participants had children, and most people had either one child (38%) or two children (47%), while the remainder of the sample (15%) had 3 or more children. The majority (57%) of children were 13 years old or under, meaning as elementary school aged children or younger they would likely still require some degree of supervision and assistance in fulfilling basic needs (e.g., meals and cooking) and/or need help with managing their schoolwork and schedule. In addition, 6% of the sample was providing care to another individual besides children (e.g., eldercare, sick loved ones) during this time. Participants also held a wide variety of jobs; 6% were entry level, 37% were at an intermediary level conducting higher technical work but without any supervisory responsibilities, 41% held supervisor/managerial positions, and 16% at senior/executive levels. Participants worked an average of 40.55 hours per week (*SD* = 6.19; range = 20-60 hours).

Measures

A full list of items and specific instructions used with each scale can be found in Appendix C.

Cognitive Boundary Work. The 27-item scale under development was made up by four subscales: anticipating boundary needs (9 items), boundary planning (6 items), regulating boundary implementation (6 items), and boundary adaptation (6 items). Participants were given

specific instructions for each subscale that they were asked to read carefully, and were also asked to "indicate to what degree this was reflective of *what you thought about* while working remotely over the past three months when your child(ren) had to stay at home due to COVID related restrictions", using the Likert scale ranging from 1 (*very untrue of me*) to 7 (*very true of me*).

Variables to Assess Discriminant Validity. Because there are few cognition-based constructs and measures in boundary scholarship or even more broadly in the work-nonwork interface literature, I tested the cognitive boundary work subscales against the most established variables related to boundary management preferences and behaviours (Allen et al., 2014). Boundary management preferences were measured using Kreiner's (2006) commonly used four item scale reflecting one's preferences for keeping work and family separate *in general* (e.g., "I don't like to have to think about work while I'm at home"; Powell & Greenhaus, 2010) with response options ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). I also used a nine-item scale to measure boundary management behaviours (i.e., the degree to which people generally act in a way that keep work and family segmented; Kossek et al., 2006) on a scale from 1 (*strongly disagree*) to 5 (*strongly agree*). Sample items include: "throughout the work day, I deal with family and work issues as they occur (reverse coded)" and "try to not think about my family when at work, so I can focus".

Confound Variables. Based on previous research in management and the broader work-family literature, personality traits are known to play a role in, or at least their perceptions of, the relationships between work and family (e.g., Allen et al., 2012). In addition, because affect is typically interconnected with cognition (e.g., Schwarz, 2012), I included Watson et al.'s (1988) PANAS scale to measure positive and negative affectivity as individual differences that could confound one's thought processes surrounding work-family boundary appraisals and planning,

regulation, and adjustment. Participants were asked to "indicate to what extent you generally feel this way, that is, how you feel on average" to 10 items for negative affect (e.g., "irritable", "hostile") and 10 items for positive affect (e.g., "enthusiastic", "strong") on a Likert scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*).

Study 2 Results

Analytic Strategy

In this study I evaluated the preliminary psychometric properties of the cognitive boundary work subscales by examining factor structure, model fit, internal consistency, the vulnerability to method effects from individual traits (i.e., negative and positive affectivity), and the inter-scale correlations. I used *SPSS 27* (IBM, 2020) to obtain descriptive statistics, correlations, and Cronbach's alphas for each subscale (see Table 2) as well as to conduct exploratory factor analysis ("EFA"). I also used *Mplus* 8 (Muthén, & Muthén, 1998-2017) to assess model fit using confirmatory factor analysis ("CFA"), where I examined chi-square (χ^2), root mean square error of approximation (*RMSEA*), Comparative Fit Index (*CFI*), Tucker Lewis Index (*TLI*), and the standardized root mean square residual (*SRMR*). Guidelines for cut-off levels suggest RMSEA and SRMR below .08 as well as CFI and TLI at and above .90 reflect good model fit (e.g., Hu & Bentler, 1999).

The influence of potential method effects that may contaminate scale responses were determined using a commonly adopted technique that compares alternative models (Podsakoff et al., 2003; Williams & Anderson, 1994). This procedure involves testing the fit of two nested models (e.g., Ferris et al., 2008; Richardson et al., 2009): first, a baseline model with no path loadings between the cognitive boundary work subscale items and the confound variable factor (i.e., are set to zero), and second, an alternative confound model where the path loadings between

the cognitive boundary work subscale items and the other latent factor are unconstrained. A meaningful method effect stemming from the confound variable is indicated when the model fit of the latter alternative model is significantly better than the fit of the baseline model. Moreover, it is then possible to determine the magnitude of influence from these variables when the model fit is significantly better by partitioning the variance in responses explained by the substantive factor, the confound variable, and random error (Diefendorff & Mehta, 2007). If this level of variance allocated to the confound variable is markedly less than the average 27% reported by Williams, Cote, and Buckley's (1989) 11 data sets, this consequently implies that any method effects stemming from these individual differences are negligible (e.g., Brady et al., 2017).

Psychometric Properties

Descriptive Statistics

As per Hinkin's (1995, 1998) recommendations for assessing indicators of item performance, I first inspected the items for extreme values (i.e., very high or low means; frequencies across response choice for each item) and non-normal distributions that may suggest the item needs to be removed from the scale. Next, I examined the reliabilities of each of the anticipate boundary needs, boundary planning, boundary regulation, and boundary adaptation subscales. The Cronbach's alpha coefficients were .80, .72, .81, and .88 for the respective subscales. Then examining the inter-item correlations, items in each of the corresponding subscales were positively correlated with the exception of one boundary planning item (#3) and one boundary regulation item (#6) that were weakly correlated with items they should be associated with. Based on these item-level correlations and the item content which was deemed not to be conceptually essential (i.e., there was sufficient coverage from other items in each subscale), these items were eliminated from the scale in subsequent analyses.

Factor Structure and Inter-Scale Correlations

I conducted an exploratory factor analysis using principal axis factoring with promax rotation, in which factors emerged with Eigenvalues over 1.0 and that I also examined with a scree plot (Fabrigar et al., 1999).[18] The EFA produced a six-factor solution for these 25 cognitive boundary work items in which anticipate boundary needs loaded onto three factors according to border type—which is reasonable given three items each capture temporal, physical, and psychological aspects of boundary needs; boundary planning, regulation, and adaptation then each loaded onto their own single factor (see Table 3 for factor loadings). This provided preliminary support for the four concepts of cognitive boundary work, with anticipating boundary needs being made up of three sub-dimensions. After examining the factor loadings and the model fit, I also decided to further refine the subscales by removing three underperforming items: anticipate boundary needs (#5), boundary planning (#6) and boundary regulation (#4). The subsequent results are therefore based on the remaining 22-item cognitive boundary work scale.

The Cronbach's alpha coefficient of the overall cognitive boundary work scale was .87 and a confirmatory factor analysis demonstrated good fit to the data (χ^2 (194) = 319.028, $p <$ .001, *RMSEA* = .064, *CFI* = .913, *TLI* = .896, and *SRMR* = .066). All the items loaded significantly onto their intended factor ($p < .001$) with standardized factor loadings ranging from .52 - .84. The magnitude of these factor loadings also exceeds the recommended minimum of .30 (Hair et al., 1998).

[18] A common factors model assumes there is some degree of error in measurement that is to be expected with the measurement of psychological constructs; conversely, a principal components approach assumes that variables are measured without error, and thus, have perfect reliability, which can lead to inaccurate estimates. In addition, a form of oblique rotation was used because it permits correlations among factors, which aligns with the conceptual nature of the stages of cognitive boundary work, whereas orthogonal rotation assumes factors are uncorrelated.

To assess the potential for confounding effects of individual affectivity, I first examined the correlations with cognitive boundary work and positive affect ($r = .31$, $p < .001$) and negative affect ($r = .02$, $p = .76$). Given that the correlation with positive affectivity was significant, I only pursued testing a method effect with this variable. Method effects of positive affectivity were present ($\Delta\chi^2$ (22) = 76.73, $p < .05$) but these effects were weak (PA: 2% of variance explained).

Correlations between subscales were all positive and significant (Anticipate and Planning: $r = .49$; Anticipate and Adapt: $r = .35$; Planning and Adapt: $r = .50$; Regulate and Adapt: $r = .42$), with the exception of the two pre-enactment stages and the enactment stage (Anticipate and Regulate: $r = .11$; Planning and Regulate: $r = .07$). These inter-scale correlations for the most part fall within Clark and Watson's (1995) suggested range of .15-.50. As expected, this indicates there are interrelationships among the stages described within cognitive boundary work in Study 1, but importantly, the magnitude of the correlations also provide evidence to suggest each of these stages are still unique parts of cognitive boundary work process overall.

Discriminant Validity

Segmentation preferences ($r = .07$, $p = .383$) and segmentation behaviours ($r = .07$, $p = .369$) were not significantly correlated with the cognitive boundary work scale. In terms of item-level discriminant validity, there also was little evidence for cross-loadings between the items of one factor and these other constructs (Gefen & Straub, 2005). Altogether, this suggests that cognitive boundary work is a distinct construct from these boundary management measures.

Study 3 Method

Participants and Procedure

I aimed to recruit a sample of 200 complete responses for a 20-minute online survey using Qualtrics Panels service.[19] Similar to Study 2, participants were employees who were working from home to some degree, had at least one nonadult child, and were located in Canada. Participants answered the cognitive boundary work scale, measures of related boundary constructs, predictors and outcomes, and provided demographic information. Qualtrics Panels was able to attain 170 complete responses from this sample criteria, including those who passed a sufficient number of attention checks.

Demographic characteristics of the final sample had a mean age of 38.92 years old (*SD* = 9.38) and was made up of 94 women, 75 men, and 1 person identifying as transgender. Most of the sample was White (71%), 17% Asian, 8% Black, and 4% were Indigenous, with the remaining selecting "other". Of those participants who were currently in a common law relationship or married (82%), the majority had a partner working full-time (65%). It was a requirement that participants had children, and most people had either one child (54%) or two children (39%), while the other 7% of the sample had 3 or more children. Most participants (84%) had at least one child 13 years old or under. Participants held a wide variety of jobs; 8% were entry level, 31% were at an intermediary level (i.e., higher technical work without any supervisory duties), 34% held supervisor/managerial positions, and 27% at senior/executive levels. Participants worked an average of 38.56 hours per week (*SD* = 9.55). Of these working hours, participants reported completing their job remotely all of the time (38%), around three quarters of the time (18%), half of the time (23%), and about a quarter of the time (21%).

Measures

[19] Participants are compensated for their completion of surveys as agreed upon by the terms with the third-party panels Qualtrics works with.

Aside from the cognitive boundary work scale, participants were asked to respond to all of the variables by indicating their agreement level with how each statement applied to them based on their experiences over the last six months and used a Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*), unless otherwise noted. A full list of items and the specific instructions used with each scale in this study can be found in Appendix D.

Cognitive Boundary Work. The 27 items were tested again in this study. However, based on the performance of a select few items in the last study, minor grammatical improvements were made to three anticipate items and two boundary planning items. For example, one anticipating boundary needs item (#5) previously read, "I evaluated *whether I need to complete certain task(s)* at a specific time of the day/week" and was changed to, "I evaluated *which task(s) must be done* at a specific time of the day/week". Any modification to the phrasing is noted in the corresponding Appendix. In this study the common instructions for all of the subscales were: "Read each of following statements and indicate to what degree this was reflective of what you thought about while working remotely over the past six months when your child(ren) had to stay at home due to COVID related restrictions".

Variables to Assess Discriminant Validity. The same boundary management preferences and behaviours scales were used as in Study 2. In addition, I included subscales to capture border permeability of work (4 items; e.g., "My family contacts me while I am working") and family domains (4 items; e.g., "I think about work related concerns while I am at home during my off-work time") from Matthews et al. (2010).

Confound Variables. Based on results of the previous study finding a correlation between trait positive affect and cognitive boundary work, I only included Watson et al.'s (1988) PANAS subscale for positively valanced emotions to test these potential method effects.

Predictors. Proactive personality was measured using 10 items that capture one's tendency toward actively making changes to things in their life (Siebert et al., 1999); for example, "I am constantly on the lookout for new ways to improve my life". A six-item measure of one's whole life perspective was used (e.g., "It is important to me that I am effective in many different parts of my life (e.g., family, career, etc.)"; Direnzo et al., 2015) on a 1 (*strongly disagree*) to 5 (*strongly agree*) scale. Work and family demands were assessed each using four items each (Boyar et al., 2007), such as "I have a lot of responsibility in my [family / job]" on a scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*) and then were aggregated for to create one variable representing the total of a person's work-family demands. I used the age of the participants' youngest child as a measure of this hypothesized essential family demand. Boundary acceptance was measured using Matthews et al.'s (2010) border flexibility-ability subscales for family (5 items) and work (4 items) rated on a scale of 1 (*never or almost never*) to 5 (*always*). Items were adapted to ask specifically about one's spouse (e.g., "My spouse would not prevent me from starting work early or working late if the need arose.") or supervisor (e.g., "My supervisor allows me to start and finish work when I want in order to meet my family responsibilities.") in the context of remote work. In addition, these scales were modified slightly so that the scope of the nonwork domain included in the instructions and items would no longer reference one's "personal life" and the mention of "friends" because this is now often considered a separate aspect of nonwork life (Wilson & Baumann, 2015) which is the outside the focus of this study. Gender was measured in the demographic questionnaire, and for the purposes of hypotheses testing included those who were coded binarily as 0 (men) and 1 (women).[20]

[20] In spite of hypothesizing about gender roles stemming from social systems, I test gender using binaries because there is evidence that even egalitarian couples adhere to these more traditional divisions of household labour when it comes to the cognitive dimensions. Daminger (2019, 2020) found that the self-proclaimed most egalitarian couples were consciously aware and accepting of these discrepancies in cognitive labour, and in fact, justified them. Also,

Outcomes. The degree to which individuals feel effective in maintaining a sense of work-life balance was measured using Carlson et al.'s (2009) six-item scale, such as "I am able to negotiate and accomplish what is expected of me at work and in my family" on a scale of 1 (*extremely ineffective*) to 5 (*extremely effective*). Job performance was measured using a five-item scale (e.g., "I meet formal performance requirements of my job.") by Williams and Anderson (1991). In addition, performance in the family domain was assessed with a select eight items from Chen et al.'s (2014) scale (e.g., "have you been participating in childcare?"). Finally, a measure of individuals perceived overall well-being was included; Tennant and colleagues' (2007) scale included 13 items such as "I've been feeling good about myself" that were answered on a scale from 1 (*strongly disagree*) to 5 (*strongly agree*).

Analytical Strategy

Similar to Study 2, my analytic plan was to first verify the factor structure using confirmatory factor analysis as well as to re-check the model fit, internal consistency, the influence of method effects, and inter-scale correlations. Then I proceeded to conduct tests of discriminant validity. Finally, I tested the hypothesized relationships using multiple regression. In doing so, I also examined incremental validity by including cognitive boundary work and related boundary constructs as predictors of the outcome variables, to determine whether the new scale predicts above and beyond these established constructs.

Study 3 Results

Psychometric Properties

I conducted a confirmatory factor analysis that supported the factor structure of cognitive boundary work. Specifically, the latent factor for anticipate boundary needs included three

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given the inclination for social desirability surrounding gender role beliefs for example, I decided it was ultimately best to first test how gender of the respondent influences their cognitive boundary work.

subordinate factors according to border type (i.e., psychological, temporal, physical), and then one superordinate latent factor for each of boundary planning, regulating boundaries, and boundary adaptation. I examined model fit first of the full 27-item scale. Consistent with the results of Study 2, the same two boundary planning items and two boundary regulation items were removed based on the inter-item correlations, factor loadings, and model fit. Though, because the anticipate boundary needs item (#5) was revised and performed better, it was retained in this study for subsequent analyses.

The Cronbach's alpha coefficient of the overall 23-item cognitive boundary work scale was .93. A confirmatory factor analysis demonstrated adequate fit to the data (χ^2 (221) = 472.73, $p < .001$, *RMSEA* = .082, *CFI* = .873, *TLI* = .855, and *SRMR* = .084). All the items loaded significantly onto their intended factor ($p < .001$) with standardized factor loadings ranging from .55 - .87, which also exceeds the recommended minimum of .30 (Hair et al., 1998). Correlations between the four subscales' latent factors were all positive and significant (Anticipate and Planning: $r = .65$; Anticipate and Regulate: $r = .47$; Anticipate and Adapt: $r = .64$; Planning and Regulate: $r = .44$; Planning and Adapt: $r = .61$; Regulate and Adapt: $r = .53$).

Method Effects

To assess the potential for confounding effects of individual affectivity, I first examined the correlations with cognitive boundary work and trait positive affect ($r = .29$, $p < .001$). Due to this significant correlation, I then pursued testing a method effect of positive affectivity. Method effects were present ($\Delta\chi^2$ (23) = 50.985, $p < .05$) but these effects were again quite weak (PA: 1% additional variance explained).

Discriminant Validity

The correlation between cognitive boundary work and segmentation preferences (r = .11, p = .138), and work border permeability (r = .01, p = .893) were not significant. While segmentation behaviours (r = .18, p = .017) and family border permeability (r = .24, p = .002) were significantly correlated with the cognitive boundary work scale, these relationships were weak. Though, I proceeded to conduct tests of discriminant validity for the variables with significant correlations to ensure these are indeed better modelled as unique constructs.

First, I conducted CFAs comparing two- and one-factor models where cognitive boundary work and the other boundary variable were either loaded onto their own corresponding factor or loaded altogether onto one factor, respectively (Anderson & Gerbing, 1988). For both segmentation behaviours ($\Delta\chi^2$ (1) = 122.86, $p < .05$) and family permeability ($\Delta\chi^2$ (1) = 131.27, $p < .05$), a two-factor model with cognitive boundary work always fit significantly better than a one-factor model. In addition, the single latent factor only explained an average variance of .04 for family permeability items and .03 for segmentation behaviour indicators.

Second, using Fornell and Larcker's (1981) method to examine discriminant validity, each latent factor should better explain the variance of its own indicators rather than the variance of other latent constructs as indicated by their squared correlation (Hair et al., 2014; Rönkkö & Cho, 2022). In every case, the average variance extracted by both factors was greater than the squared correlation between latent constructs (AVE: CBW = .37, family permeability = .41, segmentation behaviours = .21; r^2 = .05 and .07, respectively).

Third, I used another test for discriminant validity posited by Henseler et al. (2015) known as the heterotrait-monotrait method ("HTMT"). This procedure can be used as a criterion by creating a ratio of correlations where the average correlations between items across constructs (e.g., cognitive boundary work items and boundary management items) are examined relative to

the average correlations of indicators within the same construct. If the value of the HTMT is close to +/- 1.00 and higher than a predefined threshold, such as the recommend 0.85-.90 level (Gold et al., 2001; Kline, 2011; Teo et al., 2008), then one can conclude that there is a lack of discriminant validity (Ab Hamid et al., 2017). Based on the HTMT ratios calculated, the estimates were well below the recommended threshold (family permeability = .30; segmentation behaviours = .24). In sum, results of these tests support that cognitive boundary work is a distinct construct from these existing boundary management variables.

Hypotheses Testing

Descriptive statistics including zero-order correlations between study variables can be found in Table 4. I first regressed all of the predictors on cognitive boundary work. Proactive personality (b = .46, SE = .06, p < .001, partial η^2 = .52), total work-family demands (b = .20, SE = .09, p = .033, partial η^2 = .17), and gender (b = .25, SE = .09, p = .008, partial η^2 = .21) significantly predicted cognitive boundary work, supporting Hypotheses 1, 3, and 6, respectively. However, whole life perspective (b = .18, SE = .12, p = .135), age of youngest child (b = .01, SE = .01, p = .370), spouse boundary acceptance (b = -.04, SE = .05, p = .387), and supervisor boundary acceptance (b = .02, SE = .05, p = .610) were not significant. Although the respective Hypotheses 2, 4, and 5 were not supported, this may in part be due to limited power from the smaller sample size. Altogether, the hypothesized predictors explaining 45% of the variance in cognitive boundary work.

I then tested four separate models regressing each outcome on cognitive boundary work. Providing initial support for Hypotheses 7-9, cognitive boundary work significantly predicted work-family balance effectiveness (b = .211, SE = .05, p < .001, r^2 = .11), job performance (b = .22, SE = .08, p = .003, r^2 = .05), family performance (b = .25, SE = .07, p < .001, r^2 = .08), and

overall well-being (b = .21, SE = .07, p = .002, r^2 = .05). In addition, I re-tested these relationships and found they were significant above and beyond the inclusion of the other boundary variables. Taken together, this provides evidence for the criterion-related and incremental validity of cognitive boundary work.

Study 4 Method

Participants and Procedure

I recruited an initial sample of 746 participants to complete an online study using the Prolific platform.[21] The inclusion criteria was similar to previous studies (i.e., remote working parents who had children), but this time I recruited participants from the United Kingdom and expanded the scope of the context to where children had returned to school. To build on the previous studies, I made an important theoretical and methodological improvement to the design. I used a weekly diary study to more directly test the dynamic nature of the phenomenon theorized in the model. By garnering multiple observations of the same variable for each person and separating predictors and outcomes, this also had the ancillary benefit of helping to preventively manage some common method biases (Podsakoff et al., 2003). Consequently, this allowed me to test the hypothesized relationships at the between- and within-person level.

I surmised from the qualitative responses that cognitive boundary work manifests episodically and therefore decided to examine this phenomenon to reflect one's experiences for the week (vs. daily). In terms ongoing boundary work, people tended to think about anticipating upcoming tasks and make boundary plans at the start of the week, regulate those intended boundaries throughout the week, and then assess their weekly progress at the end of the week.

[21] Due to the expected attrition across multiple surveys and potential for subsequent exclusions, I aimed to recruit 750 people in order to end up with 500 complete survey responses matched across the surveys. Participants were paid between 2.00 GBP for completion of the first survey at Time 0 and 1.50 GBP for each of the subsequent surveys they completed at Times 2-4.

For the regulation stage specifically, people likely have to manage and monitor their boundary implementation more in the moment or on a daily basis, but a week still provides an appropriate time frame as people have recent memories of these experiences over the previous days. Thus, I conducted an experience sampling study with a four-part data collection occurring at one-week intervals. At Time 0 in the first week, participants completed all between-person variables (i.e., predictors and demographic questionnaire). Then in each of the subsequent three surveys (Times 1 – 3), participants completed the weekly cognitive boundary work scale and all of the outcome measures. Like in the previous studies, participants were also identified as potentially being unconscientious responders when they failed to correctly answer at least half of the total attention check items. Consequently, after merging individuals' responses over the four surveys and excluding any careless responses from the analyses, there were 615 participants with complete matched responses including three observations for cognitive boundary work and outcomes (N_{obs} = 1845).

Demographic characteristics of the final sample was 53% female and had a mean age of 42.4 years old (*SD* = 8.73; range 24-65 years). Most of the sample was White (89%), 5% Asian, 3% were Black, and the remaining few people were Latinx or Indigenous. Of those participants who were currently in a common law relationship or married (89%), the majority were dual-earner couples with 62% of their partners working full-time hours. Most people had either one child (40%) or two children (46%), while the remainder of the sample (14%) had 3 or more children. The majority (75%) had at least one child who was 13 years old or under, meaning they would likely require at least some degree of supervision and assistance in fulfilling basic needs (e.g., meals and cooking) and/or need help with managing their schoolwork and schedule. Participants also held a wide variety of jobs. Of these, 6% were entry level, 35% were at an

intermediary level conducting higher technical work but without any supervisory responsibilities, 46% held supervisor/managerial positions, and 13% at senior/executive levels. Participants reported working an average of 37.45 hours per week over the prior six months (*SD* = 6.68). Of these working hours, participants reported always completing their job remotely (35%) and sometimes completing work remotely and sometimes remotely (65%).

Measures

A full list of items and specific instructions used with the scales included in this study can be found in Appendix E.

Weekly Cognitive Boundary Work. The same 27 items from Study 3 were tested in this study. In each weekly survey, participants were instructed to "read each of following statements and indicate to what degree this was reflective of what you thought about *over the past week*."

Predictors. The same scales were used as in Study 3. Aside from stable trait and attitude variables that asked participants to respond in general, respondents were asked to indicate their agreement with their perceived level of work-family demands based on their experiences over the last three months.

Weekly Outcomes. The same scales were used as in Study 3 with two exceptions. First, the instructions for all of the outcome measures were to respond for the past week. Second, family performance in the family domain was assessed with Chen et al.'s (2014) full 17-item scale this time, which includes five items related to the completion of tasks (e.g., "have you been keeping up with your share of household chores?") and 12 items for the maintenance of familial relationships (e.g., "have you been participating in family activities?").

Analytical Strategy

The data contained a hierarchical structure whereby three weekly assessments were nested in each individual. To analyze this type of nested data and test the hypothesized relationships, I conducted multilevel modeling analysis in *Mplus* 8 (Muthén, & Muthén, 1998-2017). This approach models two levels: the within-person (i.e., weekly observations) and between-person level (Raudenbush & Bryk, 2002). Hypotheses 1-6 regard the effects of between-person level predictors in predicting weekly cognitive boundary work. To test these hypotheses, a random-intercept-as-outcome model was estimated for the prediction of weekly cognitive boundary work, with proactive personality, whole life perspective, work-family demands, age of youngest child, spouse's and supervisor's boundary acceptance, and gender as between-person level predictors of the random intercept (see equations in Table 7 footnote). Specifically, to test their cross-level main effects, the random intercept of cognitive boundary work was regressed on these seven between-person predictors (γ_{01}, γ_{02}, γ_{03}, γ_{04}, γ_{05}, γ_{06}, γ_{07}). These between-person level predictors were centered by grand mean to facilitate the interpretation of coefficients (Aiken & West, 1991).

Hypotheses 7-9 regard the relationship between cognitive boundary work and individual outcomes, all measured at the within-person level. To test these hypotheses, a random-intercept random-slope model was estimated for the prediction of each of the four weekly outcomes (i.e., work-family balance effectiveness, family performance, work performance, and overall well-being) with weekly cognitive boundary work as the within-person level predictor (see equations in Table 8 footnote). Weekly cognitive boundary work was group mean centered to facilitate interpretation of the results. Hypotheses 7-9 were tested by estimating the mean of the random slope (γ_{10}) of weekly cognitive boundary work in predicting each outcome.

Study 4 Results

Descriptive statistics can be found in Table 5. Before testing the hypotheses, I conducted a two-level confirmatory factor analysis for cognitive boundary work based on the 23 items from Studies 2 and 3. One anticipate boundary needs item (#3) that performed well in the prior studies was removed because it did not load on the expected factor. The two-level CFA model including 22 cognitive boundary work items demonstrated acceptable fit to the data (χ^2 (422) = 2208.84, p < .001, *RMSEA* = .048, *CFI* = .890, *TLI* = .879, $SRMR_{within}$ = .089 and $SRMR_{between}$ = .119).

Testing the Predictors of Cognitive Boundary Work

I first tested a null model (i.e., a model including no predictors on either level) to ensure multilevel modeling was warranted for the prediction of cognitive boundary work. The within- and between-person variances were significant, meaning that cognitive boundary work did not only vary across individuals but also varied across weeks for the same person. The intra-class correlation (*ICC(1)*) was .76 for cognitive boundary work, indicating that 76% of the variance was at the between-person level and 24% was at the within-person level. This lent support to the appropriate use of a two-level model.

Parameter estimates can be found in Table 7. In predicting cognitive boundary work, there was a significant main effect of proactive personality (γ_{01} = .21, *SE* = .04, p < .001), whole life perspective (γ_{02} = .29, *SE* = .08, p < .001), work-family demands (γ_{03} = .29, *SE* = .07, p < .001), age of youngest child (γ_{04} = .01, *SE* = .01, p = .023), and gender (γ_{07} = .13, *SE* = .06, p = .024). As such, employees who tend to be more proactive, take a whole life perspective to prioritize multiple domains, have greater work and family responsibilities and those demands which are more essential with young children, and certain groups of individuals (women) are more inclined to engage in cognitive boundary work on a weekly basis, supporting Hypotheses 1-4 and 6. However, boundary acceptance stemming from one's spouse (γ_{05} = .02, *SE* = .03, p =

.577) or supervisor (γ_{06} = -.02, *SE* = .03, *p* = .502) were not significant in predicting cognitive boundary work. Again, Hypotheses 5A-B were not supported. All the level-2 predictors together explained 23% of the variance in weekly cognitive boundary work ($p < .001$).

Testing the Outcomes of Cognitive Boundary Work

Again, I first tested null models to ensure multilevel modeling was warranted for the prediction of each outcome variable. The within- and between-person variances were significant, meaning that all of the outcome variables varied across individuals as well as across weeks for the same person. Supporting the use of two-level models, the *ICC(1)s* were .57 for work-family balance, .56 for job performance, .65 for family performance, and .74 for well-being.

Weekly cognitive boundary work predicting weekly outcomes was tested via estimating a random-intercept random-slope model for each criterion variable at the within-person level. Table 8 presents parameter estimates for these models. Cognitive boundary work was positively related to work-family balance effectiveness (γ_{10} = .13, *SE* = .03, $p < .001$), supporting Hypothesis 7. In support of Hypotheses 8A-B, the weekly cognitive boundary work to job performance relationship (γ_{10} = .30, *SE* = .05, *p* = .001) and weekly cognitive boundary work to family performance relationship (γ_{10} = .18, *SE* = .04, $p < .001$) were both significantly positive. Finally, the cognitive boundary work to well-being relationship was significant (γ_{10} = .11, *SE* = .03, $p < .001$), which provided support for Hypothesis 9. These results indicated that participants reported greater effectiveness in attaining work-family balance, better performance in both work and family domains, and an enhanced sense of well-being in weeks when they engaged in more cognitive boundary work than in other weeks with less cognitive boundary work. Put simply, the results suggest cognitive boundary work is having the desired impact on key goals.

CHAPTER 5

General Discussion

Summary of Findings

I began with an inductive approach to explore remote working parents' experiences with work-family boundaries during the pandemic. Across two samples of qualitative data in Chapter 3, I found that these individuals engaged in some degree of *cognitive boundary work*—i.e., anticipating boundary needs, boundary planning, regulating boundary implementation, and adapting boundaries—in a way that enabled them to manage their work-family responsibilities effectively. Further, I observed that an individual's agency over how they constructed, controlled, and changed their boundaries was inextricably connected to key factors in their *boundary context*. Namely, influential work and family domain relationships impacted individuals' use of boundaries and social role prescriptions uniquely affected the acceptance of mothers' and fathers' intended boundaries.

Accordingly, I used these findings to build new theory on individual boundary work as a dynamic and interdependent process. Specifically, I incorporated an action regulation perspective to help theorize the linkages between the mental efforts applied to the cognitive stages of boundary work and to expound on the specific ways that external factors can influence one's drive and capacity for engagement across these pre- to post-enactment phases of boundary work. Couched as a goal-orientated process, people were motivated to appraise the boundaries inherently required to complete all of their upcoming all work and family tasks and then use this information in planning how to manage the discrepancy between available and ideal boundaries—a function of one's combined needs and contextual constraints—that would help address their holistic work-family responsibilities (i.e., *pre-enactment*). These decisions (or lack

thereof) provided an indication as to the structure of boundaries that would subsequently be implemented, in which people monitored their own adherence to the work and/or family role(s) they were meant to be in as prescribed by intended boundaries; they also tried to mitigate any internal or external distractions to maintain or re-establish boundaries (i.e., *enactment*). Finally, people engaged in self-reflection regarding these boundary-laden experiences and this feedback was then applied to thinking about potential adjustments in future boundary work that would help them advance their work-family goals in light of the current context (i.e., *post-enactment*).

Subsequently, in Chapter 4, I sought to further develop cognitive boundary work as a construct and explore its correlates using a multi-study approach. I first underwent a process of creating and validating a scale to quantitatively examine the cognitive boundary work concepts identified in my qualitative findings and then was able to examine proposed predictors and outcomes. Across all three studies support was provided for the factor structure—substantiating the overall conceptualization of this construct. Similarly, there was evidence of discriminant validity from other boundary constructs (i.e., segmentation preferences and behaviours in Studies 2-3; border permeability in Study 3). In Studies 2-3 where method effects were tested, this showed there was limited influence from potentially confounding trait variables (i.e., affectivity). Thus, this established the psychometric properties of the scale and evidenced many aspects of its construct validity, which allowed me to proceed testing the hypothesized relationships.

To further establish the role of cognitive boundary work in the holistic process of individual boundary work, I again adopted action regulation theory to guide the development of hypotheses that were subsequently tested. Using both cross-sectional (Study 3) and repeated measures designs (Study 4), I found support for the majority of my hypotheses. In particular, individual traits (i.e., proactive personality, whole life perspective), total work-family demands

and those demands that are more essential (e.g., younger children), and gender (i.e., women) were positively associated with cognitive boundary work. However, I did not find support for the hypothesized role of spouse's and supervisor's boundary acceptance. I surmise this lack of significant relationships in the quantitative studies may be due to inappropriate measures to operationalize these variables (i.e., adapted existing border flexibility-ability scales) and in particular because the items did not sufficiently cover the different ways other domain members might influence the cognitive stages. Another reason may also be that these were collected as between-person level variables that reflect aggregate or general boundary acceptance, rather than occurring on a weekly basis alongside and having an immediate influence on an individual's cognitive boundary work.

Moreover, cognitive boundary work significantly predicted perceived work-family balance effectiveness, work role performance, family role performance, and well-being. This indicates cognitive boundary work can indeed be construed as an important proximal mechanism toward supporting higher-level individual and work-family goals. In Study 3, I also found that cognitive boundary work significantly predicted key outcomes beyond such related boundary variables (i.e., supporting its incremental validity), and when taken together with the support for many of these theory-driven hypotheses, this altogether provides additional evidence of construct validity. Finally, Study 4 also tested the dynamic nature of the proposed construct and model with respect to how the relationships unfolded over weekly episodes. Thus, I found support for these hypotheses at both the within- and -between person levels, which goes to show that this can be an episodic phenomenon.

In sum, my dissertation package adopted a mixed method approach to triangulate my findings across several qualitative and quantitative samples in which I developed and tested new

theory on cognitive boundary work as part of an ongoing and motivated process. This elucidates how behaviours tied to the enactment of boundaries ultimately cannot be detached from the cognitive effort that is fundamental to the broader practice of boundary work and that is intricately connected to one's boundary context. The quantitative studies further exemplify the salience of cognitive boundary work as a critical tool for meeting ongoing work-family goals. Consequently, uncovering the cognitive side of boundary work underscores how the act of implementing boundaries is just one part of a much larger process in traversing and managing cross-domain relationships—a dynamic practice that is in and of itself, effortful. As such, this research stands to have several implications for theory and practice that will be discussed below.

Theoretical Implications

Individual Boundary Work

First, I shed light on the understudied cognitive nature of boundary work to understand how and why boundaries are implemented in particular ways. While attention has largely been paid to global boundary variables (i.e., integration-segmentation; flexibility and permeability) in order to answer questions regarding antecedents and outcomes of boundary management, this has left the conceptualization of boundary constructs as either individuals' preferences or behaviours. As such, my work shifts away from the emphasis on these boundary variables to tease apart the inner workings of boundary work. Unpacking the more nuanced cognitive stages inherent to the course of any boundary work makes it possible to understand how people engage in a process of making and assessing boundary-laden decisions prior to and following the behavioral enactment of boundaries. Importantly, these cognitive elements help explain why people who appear to behaviourally enact similar boundaries—according to general scale responses—may have different underlying experiences, that which may differ as a result of

varying amounts of cognitive boundary work to implement such boundaries. In other words, to gain more comprehensive insight into boundary management and how it impacts work-family goal attainment, studying the thought processes that lead people to create and optimize certain boundary configurations may be more important than describing what their boundary structure looks like. Further, the mental labour that inherently goes into this cognitive boundary work contributes to our limited understanding of boundary-spanning demands (Voydanoff, 2005) that are needed to manage work-family relationships. As such, this research expands existing perspectives in boundary scholarship to understand the cognitive manifestations of boundary work, elucidating how and why boundary-laden appraisals and decision-making, regulation, feedback and adaptation together play a crucial role in work-family management.

Second and relatedly, I build and test new theory where boundary work can be understood as a motivated process spanning pre-enactment, enactment, and post-enactment phases, and reflects the reality that boundaries do not just happen nor do they remain stagnant. Drawing on an action regulation perspective, I illuminate how people use their agency to continually shape and manage aspects of their work-family life and do so in pursuit of hierarchical goals. That is, people have lower- and higher-level goals, such that they care about having effective boundaries to organize and navigate the interface (i.e., subordinate goal) which is done through cognitive boundary work, and do so in a way that helps them perform and balance work-family role responsibilities (i.e., superordinate goals), respectively. Importantly, by identifying and linking the four cognitive stages that capture the thought processes occurring prior to, during, and after boundaries are implemented, this research offers critical knowledge into how the phases iteratively inform each other and suggests that boundary-laden experiences are not static. What people think about in structuring their boundaries, their regulation of

boundaries, and their reflections and adjustments often evolve over time through experience and based on the context these individuals are embedded in. For example, I observed that people learned from their boundary-laden experiences and this subsequently informed their decision to direct effort toward changing boundaries during their return to pre-enactment stages—underscoring the truly adaptive nature of boundary work. Consequently, these cyclical cognitive efforts applied through an ongoing practice of boundary work advances knowledge in a body of work-family research aimed at trying to understand the temporality and dynamic aspects of work-family management (e.g., Allen et al., 2019). Accordingly, this also offers new insight into a range of challenges (e.g., internal distractions to be managed; difficulties with certain types of borders; collective mental efforts underlying effective boundaries) related to the idiosyncrasies and fluidity employees' face with boundary work in modern life.

Third, by carrying an action regulation perspective through this dissertation (i.e., underpinning the conceptualization and to frame the hypotheses), this research stands to offer a cohesive explanation for why people are motivated to engage in cognitive boundary work and how it is proximal mechanism to reach or sustain work-family goals. In studying why people are motivated to engage in cognitive boundary work, Study 3 and Study 4 provided evidence for both inner drivers (i.e., proactive traits and dual-domain orientation stimulates more engagement in cognitive boundary work) and external drivers (i.e., heavy role demands and contextual constraints are pragmatic concerns that make cognitive boundary work more necessary). In addition, the role of gender was supported in both of these studies. Building on the existing research that has studied individual differences in integration-segmentation preference and work/family role salience, my findings from both the qualitative and quantitative studies highlight the pragmaticism of remote working parents while engaging in cognitive boundary

work. In particular, when remote working parents were experiencing time scarcity from managing work and family roles and were faced with certain constraints from more essential demands, they were subsequently more realistic in assessing their boundary needs and planning for different scheduling options. Likewise, when remote working parents received updated and more accurate information from their experiences, they used this feedback to rethink their initial perceptions about what boundaries they thought were actually needed for particular tasks and were not willfully stuck to any one strategy.

Moreover, this research demonstrates cognitive boundary work is used as a beneficial tool to reach or sustain work-family goals. Given Clark's (2000) position that the fundamental purpose of boundaries is to help people to successfully manage the relationship between work and family (i.e., a superordinate goal), then the effective implementation of boundaries (i.e., subordinate goals) vis-à-vis cognitive boundary work plays an important role in one's toolkit to facilitate desired outcomes. Indeed, the results supported the proposed boundary work model explicating *how* these higher-order goals are pursued in practice, providing evidence that cognitive boundary work is an important mechanism by which people achieve higher-level work-family goals on an ongoing basis (e.g., work-family balance effectiveness, work and family role performance). Similarly, cognitive boundary work also benefits holistic personal goals (e.g., well-being) which serves to expand the range of criterion that have predominantly been of interest in boundary scholarship and broadens what has historically been considered a "successful" boundary management strategy (i.e., reducing work-family conflict).

Lastly, in my dissertation I developed and validated a cognitive boundary work scale to quantitatively test the interdependencies between the four stages of cognitive boundary work in the process model (Figure 2) and the theoretical linkages proposed (Figure 3), providing an

important empirical contribution. Being among the first measures of the cognitive aspects of boundary work and work-family phenomenon more broadly, this instrument can complement existing scales as supported through the incremental validity of cognitive boundary work reported in the studies. The development of a cognitive boundary work scale therefore makes an important contribution to boundary and work-family scholarship that can stimulate many new avenues of study as well as increase the practical insights gleaned from this research collectively. More specifically, a cognitive boundary work scale creates a valuable opportunity to understand the underlying processes associated with how and why people intentionally maximize the benefits and/or minimize the downsides of using both role integration and segmentation.[22]

The Role of Boundary Context

The findings also indicate that individual boundary work is likely to operate within the confines of key contingencies. I explicate how an individual's embedment in their *boundary context* (i.e., the specific domains and systems individuals are members of that are associated with their boundaries) shapes their motivation for and power over their boundary work. Boundary scholarship has indeed considered that individuals may not have full control over their boundaries (i.e., Kossek et al., 2012), and in particular due to some limitations on their border flexibility for example (e.g., Chen et al., 2009) or through violations of enacted boundaries (e.g., Hunter et al., 2019; Kreiner et al., 2009). Yet this extant research has remained disjointed and has not fully explored which other domain members influence individuals' boundaries (i.e., "who") or made clear the ways in which one's practice of boundary work is interwoven with

[22] Such a "hybrid" approach that uses both weaker and stronger boundaries (i.e., a person spans the entire continuum) were seemingly the most common and highly effective in these remote working parents' experiences. Interestingly, this first goes to show that integration and segmentation are not mutually exclusive strategies. Second, this means the ways that people integrate work-family roles may be changing; i.e., roles do not just permeate another border, but that people actually use episodes of work-family blending, as observed with cross-domain multitasking.

their larger context (i.e., "how"). As such, the vast ways in which contextual factors may dynamically influence boundary work are yet to be fully realized.

I build on one of the notable exceptions to this—Beckman and Stanko's (2020) concept of relational boundary work—by shedding light on how other domain members have a reciprocal influence the individual's cognitive stages of boundary work. Namely, these factors can shape one's boundary needs, the options available in planning to structure boundaries accordingly, the capacity needed to adhere to intended boundaries, and the potential liberties one may have in making future changes to boundaries or in having to continually monitor their boundaries. Taking this further, based on my qualitative observations I emphasize that these familial and organizational members' *boundary acceptance* is what facilitates or constrains an individual's boundary work. In other words, it is the discretionary choice to support an individuals' desired approach to boundary work (e.g., giving employees' autonomy over their work-family boundaries) that is most critical to focus on rather than the elements that are outside the other domain members' control (e.g., organization's flexible work policies) or more fixed structural elements of one's work and/or family context (e.g., children's school taking place between 9-3). In addition, in the qualitative study, I found that it is not just those who would traditionally have the power to affect decisions (e.g., spouses), but all members sharing the same work-nonwork blended environment (e.g., children) that can impact the focal person's boundary-laden decision-making and compel more cognitive effort to oversee their boundaries due to both direct and indirect disruptions. Although I did not find support for the hypothesized role of spouse's and supervisor's boundary acceptance in the quantitative studies for reasons speculated in the above summary, these observations give rise to many new questions to be explored.

Furthermore, because people—and their boundaries—are entrenched in social systems which dictate distinct prescriptions and proscriptions surrounding work and family domains, this translates to placing limits on certain individuals' access to boundaries. In particular, I found strong support for gender roles differentially ascribed to women and men shaping and polarizing their experiences with boundaries and cognitive boundary work across the qualitative data and both quantitative studies. Working mothers tended to experience more constraints with their spouse in co-crafting and controlling their boundaries effectively, which was inextricably linked to fathers' experiences—working or otherwise—that were generally indicative of being able to protect their work, and in some cases personal, boundaries more strictly. Broadly, this suggests that expectations about work-family boundaries are not only stemming from the corresponding or adjacent domains, but there are also larger social forces at play influencing relevant norms about domain membership. This is important because this could lend itself to other ways in which boundaries differ for various groups such as according to cultural context, which may also be connected with governments' social policy that may or not protect all of its citizens from basic work-family management issues. For instance, ideal worker norms differ around the world but are intense in the North American context, such that this may drive people to try to structure their boundaries in different ways or have more difficulty in negotiating the interfacing family role responsibilities (Schulte, 2015). Consequently, this underscores the possible myriad of ways that people might lack reliable access to certain types of important boundaries and that research is needed to understand these challenges different groups may face; where an infusion of other theories (e.g., social roles; Eagly & Wood, 2012) may help to deepen this body of knowledge.

More specifically, identifying this novel predictor stands to advance the little research done to date on the intersection of gender roles and boundary management (e.g., Capitano et al.,

2017; Paustian-Underdahl et al., 2013). Namely, this research sheds light on the ways inequities actually manifest between women and men at home. On top of women in heterosexual couples more often being responsible for the lion's share of family and household labour across physical and cognitive dimensions (e.g., Daminger, 2019), the ways how working mothers were able to address their disproportionate nonwork responsibilities (Shockley & Shen, 2016) were impeded by the relatively limited boundary options available to them. Further, engaging in cognitive boundary work serves as yet another source of mental labour that must be done for themself *and* other members of their family unit to ensure they are able to organize and accomplish these heightened work-family responsibilities. One potential repercussion of having little access to stronger boundaries—i.e., enduring prolonged blending of simultaneous work-family duties—and boundary work being more cognitively demanding is thus the potential to force major life changes. Working mothers were unique in describing feeling like they would have to do something drastic to relieve some of the pressure, such as contemplating a reduction in job hours or activities, taking a leave, or even quitting. Understanding working mothers' unique boundary-laden experiences therefore contributes to the broader work-family perspective on gender inequality (e.g., Kossek et al., 2017; Paustian-Underdahl et al., 2019) by helping to unpack how and why inequitable work-family dynamics are fostered and galvanized. This can have implications for understanding the breadth of barriers women face in career advancement.

Taken together, I conceptualized these factors as all being part of cultivating an underlying "boundary context" to better aggregate conclusions from extant research, but more importantly, to ensure that each of these factors are understood as not occurring in a vacuum. It is the *interplay* of these external influences that are most meaningful for understanding individuals' true experiences with boundaries and work-family more broadly. Although they

have largely been studied as isolated factors, this shift has proved crucial as I observed that contextual factors indeed interact and exacerbated or attenuated the overall necessity of and effort required to engage cognitive boundary work. Using a simple but illustrative example, a spouse's unwillingness to be cooperative in boundary scheduling was often eased by a supervisor's support for the individual's desired boundaries and allowing them to manage work-family boundaries throughout the workday in a way that best fit their idiosyncratic needs. Further, the highly contextualized nature of individuals' cognitive boundary work highlights another way in which the entire process is more dynamic. There is not one discrete or single point at which any one or more of these external factors exert their influence on boundary choices and the person's ability to maintain intended boundaries. Instead, it is an ongoing practice of creating and managing boundaries jointly with others, which is a two-way relationship that can evolve over time. Thus, expanding on how exactly such relational influences and social roles may constrict and/or facilitate the various stages of boundary work provides a better indication of how one's context can uniquely affect an individual's experiences and disparities through constructing, controlling, and changing work-family boundaries.

Practical Implications

Making these notable advancements in boundary scholarship also stands to connect the research more strongly with the experiences of contemporary employees who are managing the complexities of work-family life. First, having unpacked the various phases of cognitive boundary work provides a checklist of sorts for people who are in need of a template to improve their work-family boundary management in pursuit goals such as work-family balance, work and family role performance, and well-being. It also makes it possible to pinpoint where challenges occur as well as potential areas to target solutions that will improve boundaries and ultimately

work-family management. Notably, having granularity in understanding the physical, temporal, and psychological boundary needs at the task level garners key sources of information about the concrete and real-world challenges people face, which can direct upstream and downstream solutions with boundary work. Specifically, this may indicate whether the issue is the person's appraisal of boundary needs and constraints (e.g., how much time a specific task realistically takes to finish) and then ability to make plans that will best fit together the corresponding boundaries, or whether they are having difficulty with the actual spaces, times, and/or thoughts required by certain tasks or a combination of these boundary-laden task needs.

Second, each of the stages is important to effective boundary implementation in their own right. The qualitative findings demonstrated pre-enactment stages were critical in setting people up for success with boundaries because creating plans and routines allows people to spend less mental energy trying to figure out where, when, and how they should be tackling work and family responsibilities throughout the day or week. This frees up much needed mental space to actually be engaged in and perform the role(s) they are supposed to be in. In a similar vein, using tools to help track some of this work-family management (e.g., virtual or paper calendars, notepads, time management apps/websites) was described by many respondents as critical for simplifying the oversight of boundaries as well as to keep other domain members up to date and help them adhere to intended boundaries (e.g., family members). Moreover, there were new "tactics" people brought up in the remote working context that were aimed at pre-emptively easing effort needed to implement and maintain psychological boundaries. For instance, similar to how a traditional commute bookends the exit of one role and entrance to another with a more neutral nonwork-nonfamily transitionary period (e.g., personal activities as intermediary periods

between work and family), individuals can try to proactively design their schedules in a way that facilitates clean mental switches during changeovers between episodes of single-domain tasking.

Subsequently, regulation is important to adhere to the borders that are intended to be implemented at any given time. Put simply, this could mean a person managing to keep themself in the office and fully engaged for the hours meant for doing deep work tasks, which is not always easy but can be made possible when one is deliberate about boundary maintenance. In particular for borders that are psychological in nature, this is necessary because of the potential for both internal (e.g., daydreaming) and external distractions (e.g., chime of emails coming in after hours) that may not lead people to leave a work or family space before they are supposed to but can still disrupt the prescribed thoughts and feelings of scheduled work tasks. This means that successful implementation of any boundaries—whether they are set out through well-designed boundary plans or impromptu boundaries decided on-the-fly—calls for an alignment in an individual's capacity (e.g., necessary energy and attentional resources). To facilitate this boundary regulation, people try to signal to themselves the "hat" they should be wearing (e.g., moving between "single-use" spaces, changing between work and leisure clothes) or to indicate this to others (e.g., out-of-office emails, calendar black outs). In these liminal periods where boundaries initially have to be created, set up considerations regarding even the most basic spatial design features (e.g., creating one's own office space with adequate desk/chair, quiet, sufficient light) can help people maintain their boundaries and be conducive to role performance.

Following up their experiences with implementing boundaries, it was also interesting that people were proactively doing a lot of their own problem-solving to prevent further issues with boundary management and/or in considering how to better craft their work-family boundaries. If regulating boundaries is a significant challenge, it can be worthwhile to reflect on what the

underlying issues are and/or research potential solutions, and then return to adjust planning decisions that could facilitate boundary implementation. In general, people can be more effective by matching their tasks' needs, and thus boundaries, to the body's natural rhythms and likelihood of available energy and focus (e.g., being most productive on cognitively demanding tasks in the morning when one is most alert; Barnes, 2015).

Third, in terms of trying to say which overall boundary schedule works best, there is no one size fits all that will work perfectly for everyone. Each person has a unique combination of boundary needs and constraints stemming from their own roles, characteristics, and boundary context, which together shape their more ideal configuration of stronger and weaker boundaries. However, one through line of these idiosyncratic boundary schedules is that people engage in cognitive boundary work and use a combination of integration and segmentation.[23] In fact, observing these experiences suggested such a hybrid strategy was among the most useful, such that integration and segmentation both serve an important purpose for work-family management. On a basic level, segmentation is realistically needed to some degree for *everyone* to be effective in performing deeply demanding tasks (i.e., calls for single-domain tasking). Focusing on one task and having structures in place that support focused attention can help people get into a state of flow, making it easier to perform well (Csikszentmihalyi et al., 2014). At the same time, integration is valuable for accomplishing a combination of light work and family tasks (i.e., via cross-domain multitasking) and in the larger sense helps to best address one's collective inventory of work-family role responsibilities. The core idea here is supported by multitasking research that suggests performance quality is only sustained when tasks are simple (Salvucci,

[23] It was only rare cases that people chose for their boundaries to lean fully to one side or another, and these were mostly instances where the individual had a unique situation and privilege to split their roles in such a way. But for most people, using one extreme as an entire strategy was neither realistic and feasible or necessarily as effective.

2013), and therefore why isolated attention and stronger boundaries for important and cognitively demanding tasks remains critical. This ultimately means the decision to integrate roles is most beneficial when the strategy is deliberate and appropriately matched with task needs through structured boundary planning; that is, cross-domain multitasking should work best when it increases task efficiency with little to no expense for effectiveness.

Fourth, for organizational members such as policymakers, managers, and even team members, the findings suggest more awareness and understanding is needed to ensure employees are able to manage their work-family dynamics in a way that best fits their needs. This also goes to show that the mere presence of a policy inside organization is insufficient to ensure individual employees are able to successfully navigate the work-family interface. Even with the existence of family-friendly policies and practices put in place by organizations (e.g., flexible work arrangements which allow people to alter the times and/or places a portion of their job is conducted; Kossek & Michel, 2011), implicit and explicit approval by one's supervisor and/or colleagues (i.e., the overriding culture; Rofcanin et al., 2017) can determine whether each person will utilize these options. By extension, buy-in and support from management and team members is critical for employees to have options for different configurations of boundaries and that these will be respected when it comes time to implement them. Frankly, this may also require a broader ideological shift, such that people are able to accept their colleagues have family lives that should be treated as equally as or even more important than work. Lending some credence to utility of this recommendation, there can be two-way benefits of these family-support provisions for both employees and their organizations (Hammer et al., 2007, 2011; Kossek et al., 2018). Family-supportive supervisors and organizations have been linked to reduced work-family

conflict and turnover intentions as well as increased employee engagement and positive perceptions of the organization (see Crain & Stevens, 2018 for a review).

On a related note, it is crucial that management understands the potential biases they have toward working mothers and in particular the double-bind women are placed in with respect to boundaries. Women are more likely to be pushed into integration by family members while at the same time then have fewer options to mitigate persistent work-family blending. That is, having relatively less isolated work time especially when working remotely and having young children (Dush et al., 2018) can also have larger consequences for women in the workplace (e.g., limiting supervisor's perceptions of their promotability; Paustian-Underdahl et al., 2013). Even with the return to some pre-pandemic normality, working moms more often have to manage work and childcare synchronously without reprieve—what Boncori (2020) recently called the new "never-ending shift"—which may have unprecendeted consequences on their careers and lives as a whole. Though, managers should be careful not to consider this a "women's issue" as biases towards working mothers are often underlied by presumptions or questions about their job commitment and performance (Kossek et al., 2017). Managers should thus also try to enable working fathers to be more engaged in their work-family management.

Fifth, the family side of the interface is another place where people may implement changes to improve their work-family boundaries. For those working from home especially, they are more often sharing space with other cohabitating individuals in an inherently blended work-nonwork environment. Particuarly for those whose family members' needs were more dependant on the focal individual and/or others who were less able to regulate themselves (e.g., younger children, elderly parents), this can be more challenging. As a result, there were various ways in which others at home can directly and indirectly impact whether a person is able to implement

their boundaries effectively and as intended. More explicit violations include instances where someone may unexpectedly enter a closed office door during the workday for instance, whereas external distractions can also arise from the general environment such as loud noise from people in other rooms. Albeit not always perfect, there were a breadth of useful and concrete tactics that I observed people using to help deter such disrurptions. These included things like instructive signs and messaging (e.g., stop sign or whiteboard), boundary design and spatial features where possible (e.g., "single use" zones, closed and locked doors); interestingly, some of these signals people used primarily for themselves could also be informational to others (e.g., children knowing the difference between their parents' "work" and "leisure" clothes).

Further and importantly, gender equality often begins at home. Working mothers have disproportionally higher responsibilities in the nonwork domain (Shockley & Shen, 2016) and are more likely to experience work-family conflicts (e.g., Shockley et al., 2017). However, these disparities in heterosexual couples are only exacerbated by their relatively limited boundary options to complete these responsibilities. Due to a spouse's lack of cooperation, many women had restricted access to periods with stronger boundaries which made it more difficult to perform mentally demanding "deep" tasks that are common in the course of fulfilling work and family domains' needs. This experience was described by women across the board, with male partners who were also working full-time and remotely to those who were unemployed. Though, making these kinds of shifts in a couple's and family's dynamics is by no means a simple task, and this may require additional resources to even get the process started (e.g., counselling). Yet once both partners are on board, the couples in the qualitative samples who were ostensibly the most egalitarian with their boundaries provide some insight how to do this. These couples communicated extensively about their upcoming needs and were focused on taking an integrative

negotiation type of approach, allowing both partners to fulfill each of their own important job tasks while also managing their shared household and childcare responsibilities—seeing this is a "win-win" for the family. In doing so, they created and tried to follow clear rules of enactment to ensure that even the most equitable boundary plans were executed as such where one person did not end up with their boundaries more often being violated. For example, whoever was on a family shift would be responsible for everything without exceptions, including trying to make sure the other partner in a work-only shift was not disturbed. Thus, this demonstrated how it is critical for partners to be equally accepting of the boundaries that the other needs to help achieve their work and family goals.

Strengths, Limitations, and Future Directions

A key strength of this dissertation package is first and foremost that the findings were triangulated using a mixed methods approach. The cognitive stages of boundary work that were observed in the qualitative data were subsequently supported and replicated through factor analysis in the multi-study phases of scale development and were significantly associated with the theory-derived correlates. Altogether, this provided substantive evidence for the validity of this new construct. But in spite of both qualitative and quantitative designs offering their own methodological advantages that can offset many potential limitations of a single method, each paradigm is not without limitations. These will be discussed in succession below.

One of the main concerns of qualitative methods pertains to credibility and dependability of the data and findings (Pratt et al., 2020, 2022), which I tried to establish in several ways. Importantly, the qualitative findings were triangulated across data sources that I collected sequentially using different but complementary methods. The phenomenon was first observed in discussions on virtual communities that were unprompted by the researcher and then more

directly in structured interview style questions that were completed online. Collecting posts from Reddit is in fact a key methodological contribution of this research for organizational behaviour which has yet to see the myriad benefits of these untapped data sources. For this study in particular, this highlights the real breadth of these boundary-laden experiences which were subsequently shared among survey respondents. That is, while qualitative research is often localized to a highly specific sample (e.g., priests; Kreiner et al., 2009), there was a vast range of people clearly spanning geographic regions, occupations, industries, etc. Although I did not interact with any individual posters in the online community and did not attempt to identify or "follow" specific posters as this would be counter to principles of the method, I did engage in prolonged observation of experiences being described by Redditors for a period of several months during the initial stages of the pandemic (April to August 2020). In turn, I was able to dig into these initial observations and make more deliberate comparisons between groups through the targeted survey questions with respondents who provided full demographic information.

Further, I aimed to support and be transparent about my interpretations of the data in a number of important ways. I present the findings by balancing thick descriptions with many reference quotes, including a data structure (Figure 1) as per Gioia et al. (2012) that shows how I went from concrete concepts identified in the data to higher order codes and themes, and incorporated an example of my coding on an exemplary quote (Appendix B). I also tried to give fair consideration to various plausible constructions of the data that would ultimately assign the most meaningful structure to the data. For instance, engaging in many iterations and keeping extensive notes to audit these versions, drawing on and integrating insights with the extant literature, contemplating alternate meanings, and incorporating scholarly peers' feedback.

The other common concern associated with qualitative research is a lack of transferability, which is akin somewhat to the notion of generalizability for quantitative research paradigms. This pertains to whether the phenomenon identified is believed to be highly contextualized to only the case it originates from, or, if it is likely to represent an experience that will be present among wider contexts and/or groups of people. Certainly, the pandemic can be considered an unprecedented situation with unique challenges that can be constituted an "extreme case" (i.e., salient experiences for some individuals and/or contexts). However, these are often used in qualitative research traditions to illuminate parts of a phenomenon that are generally overlooked and/or are subtler in the population (e.g., Arnould et al., 2006; Pratt et al., 2006). Likewise, some work-family and boundary scholars have argued (e.g., Allen et al., 2014) that understanding the experiences of people under more intense levels of work-family segmentation or integration are useful for revealing new insights about boundary dynamics and to tease apart previously concealed boundary-related processes (e.g., Kreiner et al., 2009; Stanko & Beckman, 2015). In this research, the pandemic context served this important purpose as it shed light on the covert actions people take to implement boundaries effectively, leading me to uncover the cognitive nature of boundary work that is historically not well understood.

To further manage concerns that these findings may not translate to the "old normal" or those who are not remote working with children at home simultaneously, I have outlined many new applications of the proposed boundary work process model and explain further how this context was useful to build new theory to capture cognition-based experiences that were likely always a part of boundary work (pp. 70). The results of the subsequent three samples mitigate many of these questions of transferability and generalizability as I tested this phenomenon in Canada, the United States, and the United Kingdom, while also expanding the scope of the

context from that similar to the qualitative samples to more general conditions managing work-family over the prior three to six months (up to May 2022).

Next, the main limitations of the quantitative studies will be discussed. First, due to the correlational nature of the design, causality cannot be inferred from these results. Second, because these were all survey designs and collected from a single source, this gives rise to the possible influence of common method bias (Conway & Lance, 2010; Podsakoff et al., 2003). Although this is typically of greater concern with findings solely from cross-sectional studies, the results were substantiated in a repeated measures design with multiple observations of the same variables for each person (Spector, 2019). Arguably each person is the best judge of their own thoughts and experiences, but future studies may also consider other sources of ratings depending on their research question and perhaps explore cognitive boundary work within couple dyads. Indeed, cognitive boundary work may be a construct and scale that can be tested at other levels of analysis which have rarely been adopted in boundary management scholarship due to the stability conceptualized into the nature of these variables (i.e., preferences) and generality of their measures. Cognitive boundary work lends itself well to studying this phenomena at the within-person level, episodically like in Study 4 or perhaps in daily diary and experience sampling methods. For example, this creates an opportunity to understand how much mental effort is applied in the conscious processing of boundary work activities each day/week and over time, or, prior to and following major changes to role and boundary structures. Going further, it could be interesting to unpack whether there are differential relationships between each of the four stages and the correlates, and whether this occurs in unique ways at different levels.

In addition to many of the ideas proposed for future applications of the process model, this research can provoke other new and important questions for the literature moving forward.

Most urgently, it is pertinent to understand who has greater/less access to boundaries, the potential reasons why these disparities exist, and what the effects of unavailable boundaries are. I focused on how this unfolded for working mothers versus fathers due to a lack of boundary acceptance, but something that became apparent in a few individuals' descriptions of their boundary-laden experiences was there may be relationship between socioeconomic status and boundaries. One of the ways this manifested was the actual spaces people lived in because economic resources are often directly tied to this, and the types of physical/spatial borders that afforded them. To be sure, the people who talked about living in smaller spaces and with more people had a more difficult time first finding and creating separate spaces to conduct deep work tasks. They described either having to use mixed work-nonwork spaces (e.g., kitchen table) or using unusual and undesirable locations which might allow them to close and potentially lock the door (e.g., bathroom, closet). The implications of this were two-fold. First, not having adequate and distinct work and nonwork spaces could hinder their ability to perform important role responsibilities, and second, a lack of avilable places to create overt lines between work and nonwork made it harder to be become or stay psychologically engaged in the role(s) they were meant to be in as work thoughts and duties would often creep into family (or vice versa). Broadly, it is critical to unpack the larger forces that are serving to deepen such inequalities felt at the interface of work and family, such as the profound role technology now plays in boundaries management (Ollier-Malaterre et al., 2019). Taken together, it is time to recognize that there is not universal access to boundaries or work-life balance in North America, and theoretically the idea of disparities in work-family boundary availabilty could also be extended to incorporate inequities stemming from a range of other sources or factors.

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APPENDIX A

Sample 1B Question Protocol

1. We would like to understand how your "typical" day or week has changed since the pandemic. In other words, what did a normal weekday look like for you in January-February 2020? What does a typical weekday in your life look like now (August 2020)? How do you feel about these changes generally?

In terms of the boundaries between work and family, some people try to keep their work and family mostly separate while others let them integrate. We would like to know what your work-family boundaries look like now and how they have been affected by the pandemic.

2. How have the boundaries between your work and family changed due to the pandemic? It may help you to think about any changes in household/family responsibilities as well as the nature of your work demands and expectations due to the pandemic. If there have been changes you have noticed, how do you feel about these changes?
3. Please describe your *initial* experiences transitioning to working in your home (the good and/or the bad). In particular, how have you been *feeling* (emotionally and physically) while simultaneously working from home and managing family/household responsibilities?
    a. How *effective* have you felt, as an employee and as a family member, over the past few months having both work and family present in the same space? Are there times when you think you have been effective doing both work and family/household activities at the same time, whereas other situations when you have to focus on a single work *or* family task to be effective? Please describe any specific example(s) from your experience.
    b. How did any of these family and/or work changes (e.g., transitioning to working from home) *initially* impact your relationship(s) with cohabitating family members, such as your significant other and/or child(ren)? How did this *initially* affect your satisfaction toward your job, organization, or direct manager early on?

People often use "strategies" or different tactics to manage the boundaries between their work and family. For instance, a strategy may involve physical/spatial, temporal, psychological, and/or behavioral boundaries (e.g., setting times and spaces when work and family are in separated/integrated). We would like to know more about your overall approach to managing your work-family boundaries during the pandemic.

4. Please describe the kinds of strategies you have decided to implement in order to manage working at home and simultaneously taking care of any household duties or family members' needs.
    a. What *motivated* you to come up with and implement a strategy to manage your work and family/household responsibilities throughout the pandemic?
    Do you have any prior experience with using this particular strategy?
    b. What have you found makes it easier or more difficult to put a strategy in place to manage the boundaries between your work and family? Please provide any specific example(s) from your experience.

Take a moment to think about how you decided which specific strategies to use when managing your work and family responsibilities and boundaries during the pandemic.

5. Try to explain your *thought process* in how you came up with a strategy to fulfill simultaneous job requirements and family/household demands throughout the pandemic (i.e., what factors do you consider?).
    a. Have you been using a different approach to handle specific situations on a case-by-case basis (e.g., what tasks to prioritize and when)? If so, describe how you decide when to use a particular strategy.
    b. Have you sought out any advice or information to help you find ways to manage your boundaries currently (e.g., looked online, discussed with another person such as family members, friends, or colleagues)? Please describe what you did and how you used the advice or information in deciding on a strategy.

Think about how implementing these strategies has impacted how you feel (emotionally and physically) as well as your ability to engage in work and/or family activities.

6. Did you try using any strategies and then realize they were not feasible or did not work well? Why did they not work? What did you do then?
    a. What is your main goal when thinking about using a strategy to manage the boundaries between your work and family? Have you changed any of your work and/or family priorities during this time? If so, how and why?
    b. How much of your effort does it take to oversee the planning and implementation of any of these strategies to manage your work and family? Has your level of effort to manage boundaries changed over the course of the last few months?

7. So far, we have asked about your boundaries in terms of their ability to help you fulfill work and/or family needs specifically. However, has your chosen strategy included any "personal downtime" for yourself (e.g., self-care and relaxation, non-family relationships, your hobbies/interests)? Overall, would you say your current situation is sustainable for you, all things considered?

8. What would you recommend to others who are in a similar position as you and are currently trying to create/implement an effective strategy to manage their work and family boundaries? Why?

We would first like to understand how your significant other has played a role in the process of how you decided on strategies to use in order to manage your work responsibilities and family's needs during the pandemic. Specifically:

9. How do you and your significant other communicate about managing your work-family boundaries? Do you and your significant other share expectations of each other and/or personal obligations such as your work requirements?
    a. Have there been any occasions when you and your significant other disagreed on your intended strategies? Describe any of these situations, what you did, and what the outcome was.

   b. Are there any ways your significant other, or possibly other cohabitating family members, has made it easier or more difficulty for you to plan and/or implement your boundary management strategies? Please provide any specific example(s) from your experience.

We would also like to understand how your organization and/or manager (i.e., person who you report to) has played a role in the process of how you decided on strategies to use in order to manage your work responsibilities and family's needs during the pandemic. Specifically:

10. Have you had to communicate with your direct manager or other organizational members during the pandemic about your strategies in managing work-family boundaries (e.g., discussing your personal/family needs and/or requesting flexible work options)? What was the outcome of this conversation or their response to this communication?
    a. Are there any ways you think that your organization/manager/team members have made it easier or more difficulty for you to plan and/or implement your boundary management strategies? Please provide any specific example(s) from your experience.

11. How have your recent experiences with creating and implementing boundary management strategies influenced your satisfaction with your job/organization/manager as well as your satisfaction in your relationship(s) with cohabitating family members (e.g., your partner, children)? Have your levels of satisfaction changed over the course of the last few months?

APPENDIX B

Example Breakdown of Qualitative Analysis

It is important to note this type of analysis is an iterative process. Despite being described as a set of linear steps, this involves coding and re-coding the data, returning to the literature and theory, and using this foundation of knowledge to refine the data structure and process model. Although at later stages of the qualitative analysis I deliberately incorporated theory to explain connections between higher-level codes and themes, I am also coming to view this data from certain personal and professional lenses (e.g., as a work-family researcher with knowledge of and interest in the boundary dynamics) that informs initial coding as well.

Step 1

I first read all the text data to pull out any relevant quotes.

Sample Excerpt: "*On top of switching off with my husband and using nap time, I've been splitting up my work into "deep work", conference calls, and light concentration work. Deep work is something you need to be really focused on and can't do with distractions. I can't really do more than 3-4 hours of that in a day anyways, it's too taxing. I do that during nap time plus the 1-2 hours before or after nap. It's tough to do conference calls with kiddo around, but I wear a headset with a directional mic, mute myself when I'm not talking and warn people that my child is around. If I can, I schedule those during meals and give my kid something that takes a while to munch on. The rest of the day is light work like emails and stuff and I can easily do that in 10 min spurts while kiddo (14 months) plays independently. This [New York Times] article really convinced me to let her play by herself for longer and longer periods*."

Using this as an example where several aspects of the individual's experience stood out, I will decompose how parts of this quote were coded (in paratheses below). This was repeated for all excerpts and responses, and similar quotes are grouped together under a first-order code (bolded).

- **Categorize work tasks and family tasks by nature of demands** (e.g., "I've been splitting up my work into "deep work", conference calls, and light concentration work")
- **Consider requirements built into certain tasks that specify where, when, or how task needs to be done** (e.g., work meeting set at a certain time and ends up overlapping with family role: "It's tough to do conference calls with kiddo around… during meals and give my kid something that takes a while to munch on.")
- **Assess attention needed for different tasks** (e.g., "Deep work is something you need to be really focused on and can't do with distractions")
- **Assess time needed for different tasks** (e.g., "I can easily do that [light work] in 10 min spurts")
- **Identify strategic scheduling alternatives to facilitate periods of deep work** (e.g., "on top of … using nap time"; "I do [deep work] during nap time plus the 1-2 hours before or after nap.")
- **Scheduling work-only and dual work-family shifts with partner** (e.g., "On top of switching off with my husband")

- **Deciding how to fit together all work and family tasks using periods of single-tasking and cross-domain multitasking** (e.g., The rest of the day is light work like emails and stuff and I can easily do that in 10 min spurts while kiddo (14 months) plays independently")
- **Thinking about internal reasons why challenges occurred with periods allocated solely to demanding tasks** (e.g., "I can't really do more than 3-4 hours of that… it's too taxing")
- **Thinking about external reasons why overlapping some work and family tasks did not work well** (e.g., "conference calls with kiddo around")
- **Processing experiences via discussion with other people and/or sources** (e.g., posting on Reddit; "This [New York Times] article really convinced me to let her play by herself for longer and longer periods")
- **Using experience to direct future adjustments; facilitation activities that support cross-domain multitasking** (e.g., "but I wear a headset with a directional mic, mute myself when I'm not talking and warn people that my child is around. If I can I schedule those during meals and give my kid something that takes a while to munch on.")

Step 2

From there the entire list of first level codes was pooled and examined further. Patterns began to emerge with respect to how these codes appeared to be similar or different and potentially redundant. Continuing with the previous example and coding of this one quote, this resulted in grouping first-order codes together under a second-order code.

One group included four first-order codes: (1) categorize work tasks and family tasks by nature of demands, (2) consider requirements built into certain tasks that specify where, when, or how task needs to be done, (3) assess attention needed for different tasks, and (4) assess time needed for different tasks.

At this point going up a level in abstraction meant beginning to apply meaning to the collections of concrete experiences under the same second order-order code. To illustrate, in making sense of this second-order code—what would become *Anticipating Boundary Needs*—specifically:

This second-order code groups together the first-order codes pertaining to everything a person thinks about relative to the upcoming tasks they are likely to perform and/or are responsible for. In particular, this involved assessing their tasks' specific needs in two main ways. First, categorizing as "deep" or "light" according to the expected nature of the task's demands. These tasks differ and inherently require divergent conditions to be performed successfully, which I concluded to be boundary-laden. For instance, when this individual says, "deep work is something you need to be really focused on and can't do with distractions", this implies needing one's full attention, and as such, prioritizing adequate time and space to facilitate being highly focused. In other words, this incorporates the knowledge that stronger psychological, temporal, and physical borders would make a person more effective while engaging in these kinds of deep tasks. Likewise, this aligned with how they describe lighter tasks that are simpler, shorter, and/or can still be performed effectively while multitasking with other roles: "light work like emails and stuff and I can easily do that in 10 min spurts while kiddo (14 months) plays independently". As

such, limited boundaries between roles were present while overlapping the performance of these tasks, but also worked as an approach to multitask across work and family. Especially in the contrast between light and deep tasks' needs, this highlighted how these were inherently boundary-laden, such that some could be done with weaker boundaries whereas others needed strong boundaries, respectively.

Second, besides demands, tasks can have specific requirements that are essentially built in to direct where, when, and how a task has to be done. These are consequently also boundary-laden, such as how this may dictate the time of the day/week the task must be performed and for how long (i.e., the strength of a task's temporal boundary needs). For example, when they described it being difficult "to do conference calls with kiddo around", suggests the times of these work meetings they have to attend are already set and these conference calls happened to coincide with fairly standard times of the day associated with fulfilling requirements of key family tasks (i.e., children's basic needs like regular meals and naps). Further, I inferred one reason why this individual described conference calls as separate of both deep and light tasks is because, whether they required concentration or not, these were the kinds of tasks that were subject to the design constraints mostly outside the person's control. Thus, people may or may not have power to change any restrictions on how some of their role responsibilities are done, but regardless, they are important parts of their task needs that people consider as it can ultimately affect the boundary needs of other tasks. Taken together, this led to making meaning of this holistic second-order code that at the same time people evaluate the inventory of work and family tasks they have to do, they also anticipate the fundamental psychological, temporal, and/or physical boundaries needed to effectively perform each task.

Step 3

At this point in the analysis, this involved putting more structure to all of the second-order codes. That is, organizing them in a meaningful way and then aggregating themes based on the relationships between second-order codes.

This first included evaluating how second-order codes relate to each other. Taking the second group of first-order codes from the above example, *Boundary Planning* appeared to differ from *Anticipating Boundary Needs* in terms of what people were thinking about (i.e., nuanced appraisals of each task vs. decision-making about how to configure all tasks together) and how they were connected (i.e., the ordering of them occurring in succession). More specifically, initially understanding all the upcoming tasks' boundary needs and constraints seemed to inform planning where people could use this information to identify and evaluate boundary alternatives from which they created an effective boundary schedule that fit together their different role responsibilities.

Moreover, after repeating this with every second-order code, this allowed me to think about how they may be subsumed by overarching themes. In doing so, I could see that these different elements of individual boundary work—*Anticipating Boundary Needs, Boundary Planning, Regulating Boundary Implementation,* and *Boundary Adaptation*—were tied together by cognition. By this stage I also began iterating more deliberately between extant research and the preliminary data structure. For instance, Daminger's (2019) work provided an important basis for

organizing what are now the four stages under the concept of *Cognitive Boundary Work* and in fact that showing how these more subtle cognitive processes were typically underlying the behaviours that had been studied primarily.

Step 4

Lastly, the complete coding structure served as the foundation for developing a process model. This is the highest level of analysis in which the aim is to conceptualize the second-order codes and themes as well as the linkages between them in a way that builds new theory. From the basis of extant work-family and boundary scholarship, I theorized that the four stages of cognitive boundary work would be most meaningfully ordered according to the placement of their role to implementing boundaries (i.e., pre- to post-enactment phases of boundary work). Further, the interplay of work and family domain membership and social systems were taken altogether as one's *Boundary Context* that cultivates influence on individuals' entire practice of boundary work.

Based on Hirschi et al. (2019) and Powell and Greenhaus' (2006) work and lack of motivational and cognition-based models of work-family relationships, I also incorporated an action regulation perspective to frame this overarching model as being a motivated part of one's ongoing work-family goal pursuit in which behaviours work together with cognition. Integrating this meta theory with boundary research therefore allowed me to explicate the connections between what has already been studied about the behavioural enactment of boundaries as being facilitated through cognitive processes I identified. In addition, this theoretical framework supported the organization, labelling, and expected connections of higher-level concepts, such as how contextual contingencies are taken into account at various stages of the process (i.e., they are appraised, planned for, regulated, and adapted around). Notably, this lens helped to explain unique observations about the phenomenon which are not well understood in the literature, such that there were dynamic aspects of and connections between cognitive boundary work that occurred prior to, during, and after the implementation of boundaries. For instance, returning to the original example, this individual's post-enactment reflections on their own boundary-laden experiences (e.g., "I can't really do more than 3-4 hours of [deep work] in a day anyways, it's too taxing.") provided feedback as to how they could subsequently make scheduling changes in a return to pre-enactment decision-making (e.g., "I do [deep work] during nap time plus the 1-2 hours before or after nap."). This altogether elucidated how people's boundaries and boundary work evolve in line with the pursuit of progress toward their important goals.

APPENDIX C

Study 2 Measures

Cognitive Boundary Work

Anticipate Boundary Needs

Instructions: To manage and perform one's various responsibilities across the work-family interface, people may mentally assess their upcoming work and family duties in terms of each task they will need to accomplish in a given day or week. This may include **thinking about** the amount of time, space, and attention needed to complete specific work tasks (e.g., attending a meeting) and family tasks (e.g., supervising children).

1. I anticipated how much of my attention will be required to effectively complete each task.
2. I evaluated whether each task will need my undivided attention.
3. I assessed whether each task can be performed with minimal concentration.
4. I anticipated how much time I will need to complete each task.
5. I evaluated whether I need to complete certain task(s) at a specific time of the day/week.
6. I assessed the amount of time I will need to budget for each task.
7. I anticipated which spaces I can use to perform each task.
8. I evaluated whether I will need a separate space to complete certain task(s).
9. I assessed whether each task will require a designated space.

Boundary Planning

Instructions: To manage and perform one's various responsibilities across the work-family interface, people may mentally devise plans that outline where, when, and how they will accomplish work and/or family tasks in a given day or week. This may include **thinking about** structuring a schedule that incorporates some periods where people keep work and family roles separate as well as other periods where work and family roles are done together.

1. I assessed different scheduling options for performing all my work and family tasks.
2. I contemplated the best way to fit together various work and family responsibilities.
3. I considered the option(s) to do some work and family tasks at the same time.
4. I considered the option(s) to focus solely on a work or family task during certain time periods.
5. I assessed potential constraints that will limit my options for accomplishing work and family duties.
6. I thought about how to transition smoothly between work and family roles.

Regulating Boundary Implementation

Instructions: To manage and perform one's various responsibilities across the work-family interface, people may have to mentally ensure their internal states (e.g., attention, energy) match what is required to fulfill the work and/or family task(s) they set out to do during a certain time period and in a specific place throughout the day or week. This may include **thinking about** adhering to the ways work and/or family role(s) responsibilities are supposed to be done as well as maintaining their focus in the face of distractions from different roles or while transitioning between roles.

1. I managed my capacity to stay focused on the work and/or family role(s) I should have been concentrating on.
2. I paid attention to whether I was adequately focused on the work and/or family role(s) I intended to be in.
3. I managed my ability to stay engaged in the work and/or family role(s) I was supposed to be doing.
4. I tried to bring my focus back when I became distracted by things unrelated to the work or family role I should have been in.
5. I tried to keep myself in the correct "mode" that I was meant to be in as an employee and/or family member.
6. I monitored my ability to mentally shift between work and family roles when required.

Boundary Adaptation

Instructions: After managing and performing one's various responsibilities across the work-family interface, people may reflect on and learn from these experiences. This may include **thinking about** the effectiveness of their overall approach as well as thinking about whether/how they could adjust their approach in the future to better address their overall needs.

1. I reflected on whether I evaluated my various work and family task needs appropriately.
2. I reflected on whether my planning allowed me to perform my work and family duties effectively.
3. I reflected on whether I was able to maintain focus in the intended role(s) as an employee and/or family member.
4. I thought about how I could adjust my schedule to maximize my effectiveness in fulfilling all my work and family task needs.
5. I thought about how I could tailor my planning to address any difficulties I was having in fulfilling all my work and family duties.
6. I thought about how I could improve my overall approach to managing work and family to be more sustainable long-term.

Boundary Management Variables to Assess Discriminant Validity

***Segmentation Preferences* (Kreiner, 2006)**

1. I don't like to have to think about work while I'm at home.
2. I prefer to keep work life at work.
3. I don't like work issues creeping into my home life.
4. I like to be able to leave work behind when I go home.

***Segmentation Behaviours* (Kossek et al., 2006)**

1. I only take care of personal needs at work when I am "on break" or during my lunch hour.
2. I prefer to not talk about my family issues with most people I work with.
3. Throughout the work day, I deal with family and work issues as they occur. (reverse coded)
4. It would be rare for me to read non-work related materials at work.
5. I tend to integrate work and family roles through the work day. (reverse coded)
6. I tend to handle emails related to my family separate from emails related to my work.
7. I try to not think about my family when at work, so I can focus.

8. I tend to not talk about work issues with my family.
9. I actively strive to keep my family and work-life separate.

Confound Variables

***Positive and Negative Affectivity* (Watson, et al., 1988)**

Instructions: This scale consists of a number of words that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent you generally feel this way, that is, how you feel on average.

1. Interested
2. Distressed
3. Excited
4. Upset
5. Strong
6. Guilty
7. Scared
8. Hostile
9. Enthusiastic
10. Proud
11. Irritable
12. Alert
13. Ashamed
14. Inspired
15. Nervous
16. Determined
17. Attentive
18. Jittery
19. Active
20. Afraid

APPENDIX D

Study 3 Measures

Cognitive Boundary Work

Instructions for All Subscales: Read each of following statements and indicate to what degree this was reflective of **WHAT YOU THOUGHT ABOUT** while working remotely over the past six months when your child(ren) had to stay at home due to COVID related restrictions.
Scale: 1 (*Very untrue of me*) – 7 (*Very true of me*)

Anticipate Boundary Needs

Subscale Preamble: To manage and perform one's various responsibilities across the work-family interface, people may mentally assess their upcoming work and family duties in terms of each task they will need to accomplish in a given day or week. This may include **thinking about** the amount of time, space, and attention needed to complete specific work tasks (e.g., attending a meeting) and family tasks (e.g., supervising children).

1. I anticipated how much of my attention will be required to effectively complete each task.
2. I evaluated [which task(s)] will need my undivided attention.
3. I assessed whether [some] tasks can be performed with minimal concentration.
4. I anticipated how much time I will need to complete each task.
5. I evaluated [which task(s) must be done] at a specific time of the day/week.
6. I assessed the amount of time I will need to budget for each task.
7. I anticipated which spaces I can use to perform each task.
8. I evaluated whether I will need a separate space to complete certain task(s).
9. I assessed whether each task will require a designated space.

Note. Slight grammatical modifications were made to items #2, 3, 5 in this round and are enclosed in square brackets.

Boundary Planning

Subscale Preamble: To manage and perform one's various responsibilities across the work-family interface, people may mentally devise plans that outline where, when, and how they will accomplish work and/or family tasks in a given day or week. This may include **thinking about** structuring a schedule that incorporates some periods where people keep work and family roles separate as well as other periods where work and family roles are done together.

1. I assessed different scheduling options for performing all my work and family tasks.
2. I contemplated the best way to fit together various work and family responsibilities.
3. I considered [options that would allow me] to do some work and family tasks at the same time.
4. I considered [options that would allow me] to focus solely on a work or family task during certain periods.
5. I assessed potential constraints that will limit my options for accomplishing work and family duties.
6. I thought about how to transition smoothly between work and family roles.

Note. Slight grammatical modifications were made to existing items #3-4 in this round and are enclosed in square brackets.

Regulating Boundary Implementation

Subscale Preamble: To manage and perform one's various responsibilities across the work-family interface, people may have to mentally ensure their internal states (e.g., attention, energy) match what is required to fulfill the work and/or family task(s) they set out to do during a certain time period and in a specific place throughout the day or week. This may include **thinking about** adhering to the ways work and/or family role(s) responsibilities are supposed to be done as well as maintaining their focus in the face of distractions from different roles or while transitioning between roles.

1. I managed my capacity to stay focused on the work and/or family role(s) I should have been concentrating on.
2. I paid attention to whether I was adequately focused on the work and/or family role(s) I intended to be in.
3. I managed my ability to stay engaged in the work and/or family role(s) I was supposed to be doing.
4. I tried to bring my focus back when I became distracted by things unrelated to the work or family role I should have been in.
5. I tried to keep myself in the correct "mode" that I was meant to be in as an employee and/or family member.
6. I monitored my ability to mentally shift between work and family roles when required.

Boundary Adaptation

Subscale Preamble: After managing and performing one's various responsibilities across the work-family interface, people may reflect on and learn from these experiences. This may include **thinking about** the effectiveness of their overall approach to addressing work-family responsibilities as well as thinking about whether/how they could adjust their approach in the future to better address their overall needs.

1. I reflected on whether I evaluated my various work and family task needs appropriately.
2. I reflected on whether my planning allowed me to perform my work and family duties effectively.
3. I reflected on whether I was able to maintain focus in the intended role(s) as an employee and/or family member.
4. I thought about how I could adjust my schedule to maximize my effectiveness in fulfilling all my work and family task needs.
5. I thought about how I could tailor my planning to address any difficulties I was having in fulfilling all my work and family duties.
6. I thought about how I could improve my overall approach to managing work and family to be more sustainable long-term.

Boundary Variables to Assess Discriminant Validity

The same boundary management preferences and behaviours scales will be used as in Study 2, with the addition of:

Family Border Permeability **(Matthews et al., 2010)**

1. I have work related items at my home.
2. I think about work related concerns while I am at home during my off-work time.

3. I stop in the middle of my home activities to address a work concern.
4. I take care of work-related business while I am at home during my off-work time.

Work Border Permeability **(Matthews et al., 2010)**

1. My family contacts me while I am working.
2. I have family related items in my workspace.
3. I think about family members when I am working.
4. I hear from my family while I am working.

Confound Variable

Positive Affectivity **(Watson, et al., 1988)**

Instructions: This scale consists of a number of words that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent you generally feel this way, that is, how you feel on average.

1. Interested
2. Excited
3. Strong
4. Enthusiastic
5. Proud
6. Alert
7. Inspired
8. Determined
9. Attentive
10. Active

Predictors

Proactive Personality **(Siebert et al., 1999)**

Instructions: Please respond to the following statements in terms of how they reflect you IN GENERAL.

1. I am constantly on the lookout for new ways to improve my life.
2. Wherever I have been, I have been a powerful force for constructive change.
3. Nothing is more exciting than seeing my ideas turn into reality.
4. If I see something I don't like, I fix it.
5. No matter what the odds, if I believe in something I will make it happen.
6. I love being a champion for my ideas, even against others' opposition.
7. I excel at identifying opportunities.
8. I am always looking for better ways to do things.
9. If I believe in an idea, no obstacle will prevent me from making it happen.
10. I can spot a good opportunity long before others can.

Whole Life Perspective **(Direnzo et al., 2015)**

Instructions: Please respond to the following statements in terms of how they reflect you IN GENERAL.

1. It is important to me that I am effective in many different parts of my life (e.g., family, career, etc.).

2. Before making a career-related decision, I think about how the decision would affect many other parts of my life.
3. I strive to be successful in many different parts of my life.
4. It is important to me that I am satisfied with my experiences in many different parts of my life.
5. I make work-related decisions based on the effects the decisions have on many other parts of my life.
6. I participate in activities outside of work because they help me feel more fulfilled in life.

Family Demands **(Boyar et al., 2007)**

Instructions: Read each of following statements and indicate to what degree this was reflective of your experiences over the past six months.

1. I have to work hard on family-related activities.
2. My family requires all of my attention.
3. I feel like I have a lot of family demands.
4. I have a lot of responsibility in my family.

Work Demands **(Boyar et al., 2007)**

Instructions: Read each of following statements and indicate to what degree this was reflective of your experiences over the past six months.

1. I have to work hard on work-related activities.
2. My job requires all of my attention.
3. I feel like I have a lot of work demands.
4. I have a lot of responsibility in my job.

Boundary Acceptance from Spouse **(Matthews & Barnes-Farrell, 2010)**

Instructions: How often have you had the following experiences over the last six months:

1. Because of my spouse, I cannot make changes to my work schedule (e.g., starting early or staying longer to finish work related responsibilities). (reverse coded)
2. If the need arose, I could work late without affecting my family responsibilities.
3. My spouse would not prevent me from starting work early or working late if the need arose.
4. My spouse would not prevent me from working an extra day in order to meet work responsibilities.
5. My spouse does not stand in the way of me rearranging my schedule to meet the demands of my job.

Boundary Acceptance from Supervisor **(Matthews & Barnes-Farrell, 2010)**

Instructions: How often have you had the following experiences over the last six months:

1. My supervisor allows me to start and finish work when I want in order to meet my family responsibilities.
2. If the need arose, I could stop working early to attend to family-related issues.
3. If something came up in my family life, it would be alright with my supervisor if started work later than usual.
4. My supervisor allows me to stop what I am working on if I need to deal with responsibilities related to my family.

Outcomes

Work-Family Balance Effectiveness **(Carlson et al., 2009)**

Instructions: Indicate your level of effectiveness with the following for the last six months.

1. I am able to negotiate and accomplish what is expected of me at work and in my family.
2. I do a good job of meeting the role expectations of critical people in my work and family life.
3. People who are close to me would say that I do a good job of balancing work and family.
4. I am able to accomplish the expectations that my supervisors and my family have for me.
5. My co-workers and members of my family would say that I am meeting their expectations.
6. It is clear to me, based on feedback from co-workers and family members, that I am accomplishing both my work and family responsibilities.

Job Performance **(Williams & Anderson, 1991)**

Instructions: Over the past six months, would your manager and/or colleagues say you have been:

1. adequately completing assigned duties.
2. fulfilling responsibilities specified in your job.
3. meeting formal performance requirements of your job.
4. completing tasks that are expected of you.
5. neglecting aspects of the job you are obligated to perform. (reverse coded)

Family & Household Performance **(shortened scale from Chen et al., 2014)**

Instructions: Over the past six months, would your family members say you have been:

1. keeping up with your share of household chores?
2. maintaining things around the home?
3. handling financial matters in your family?
4. contributing to your family financially?
5. participating in childcare?
6. spending quality time with family members?
7. participating in family activities?

Overall Well-Being **(Tennant et al., 2007)**

Instructions: Indicate how much the following statements apply to how you have been feeling overall in the past six months.

1. I've been feeling useful.
2. I've been feeling relaxed.
3. I've been feeling interested in other people.
4. I've had energy to spare.
5. I've been dealing with problems well.
6. I've been thinking clearly.
7. I've been feeling good about myself.
8. I've been feeling close to other people.
9. I've been feeling confident.
10. I've been able to make up my own mind about things.

11. I’ve been feeling loved.
12. I’ve been interested in new things.
13. I’ve been feeling cheerful.

APPENDIX E

Study 4 Measures

Cognitive Boundary Work (Measured at Time 1-3)
Instructions for All Subscales: Read each of following statements and indicate to what degree this was reflective of **WHAT YOU THOUGHT ABOUT** OVER THE PAST WEEK.
Scale: 1 (*Very untrue of me*) – 7 (*Very true of me*)

Anticipate Boundary Needs
Subscale Preamble: To manage and perform one's various responsibilities across the work-family interface, people may mentally assess their upcoming work and family duties in terms of each task they will need to accomplish in a given day or week. This may include **thinking about** the amount of time, space, and attention needed to complete specific work tasks (e.g., attending a meeting) and family tasks (e.g., supervising children).

1. I anticipated how much of my attention will be required to effectively complete each task.
2. I evaluated which task(s) will need my undivided attention.
3. I assessed whether some tasks can be performed with minimal concentration.
4. I anticipated how much time I will need to complete each task.
5. I evaluated which task(s) must be done at a specific time of the day/week.
6. I assessed the amount of time I will need to budget for each task.
7. I anticipated which spaces I can use to perform each task.
8. I evaluated whether I will need a separate space to complete certain task(s).
9. I assessed whether each task will require a designated space.

Boundary Planning
Subscale Preamble: To manage and perform one's various responsibilities across the work-family interface, people may mentally devise plans that outline where, when, and how they will accomplish work and/or family tasks in a given day or week. This may include **thinking about** structuring a schedule that incorporates some periods where people keep work and family roles separate as well as other periods where work and family roles are done together.

1. I assessed different scheduling options for performing all my work and family tasks.
2. I contemplated the best way to fit together various work and family responsibilities.
3. I considered options that would allow me to do some work and family tasks at the same time.
4. I considered options that would allow me to focus solely on a work or family task during certain periods.
5. I assessed potential constraints that will limit my options for accomplishing work and family duties.
6. I thought about how to transition smoothly between work and family roles.

Regulating Boundary Implementation
Subscale Preamble: To manage and perform one's various responsibilities across the work-family interface, people may have to mentally ensure their internal states (e.g., attention, energy) match what is required to fulfill the work and/or family task(s) they set out to do during a certain

time period and in a specific place throughout the day or week. This may include **thinking about** adhering to the ways work and/or family role(s) responsibilities are supposed to be done as well as maintaining their focus in the face of distractions from different roles or while transitioning between roles.

1. I managed my capacity to stay focused on the work and/or family role(s) I should have been concentrating on.
2. I paid attention to whether I was adequately focused on the work and/or family role(s) I intended to be in.
3. I managed my ability to stay engaged in the work and/or family role(s) I was supposed to be doing.
4. I tried to bring my focus back when I became distracted by things unrelated to the work or family role I should have been in.
5. I tried to keep myself in the correct "mode" that I was meant to be in as an employee and/or family member.
6. I monitored my ability to mentally shift between work and family roles when required.

Boundary Adaptation

Subscale Preamble: After managing and performing one's various responsibilities across the work-family interface, people may reflect on and learn from these experiences. This may include **thinking about** the effectiveness of their overall approach to addressing work-family responsibilities as well as thinking about whether/how they could adjust their approach in the future to better address their overall needs.

1. I reflected on whether I evaluated my various work and family task needs appropriately.
2. I reflected on whether my planning allowed me to perform my work and family duties effectively.
3. I reflected on whether I was able to maintain focus in the intended role(s) as an employee and/or family member.
4. I thought about how I could adjust my schedule to maximize my effectiveness in fulfilling all my work and family task needs.
5. I thought about how I could tailor my planning to address any difficulties I was having in fulfilling all my work and family duties.
6. I thought about how I could improve my overall approach to managing work and family to be more sustainable long-term.

Predictors (Measured at Time 0)

The same proactive personality, whole life perspective, perceived demands, and boundary acceptance scales and instructions were used to measure the predictors as in Study 3.

Outcomes (Measured at Times 1-3)

***Work-Family Balance Effectiveness* (Carlson et al., 2009)**

Instructions: Indicate your level of effectiveness with the following over the last week.

1. I am able to negotiate and accomplish what is expected of me at work and in my family.
2. I do a good job of meeting the role expectations of critical people in my work and family life.
3. People who are close to me would say that I do a good job of balancing work and family.
4. I am able to accomplish the expectations that my supervisors and my family have for me.

5. My co-workers and members of my family would say that I am meeting their expectations.
6. It is clear to me, based on feedback from co-workers and family members, that I am accomplishing both my work and family responsibilities.

Job Performance **(Williams & Anderson, 1991)**

Instructions: Over the last week, do you think you have been:

1. adequately completing assigned duties?
2. fulfilling responsibilities specified in your job?
3. meeting formal performance requirements of your job?
4. completing tasks that are expected of you?
5. neglecting aspects of the job you are obligated to perform? (reverse coded)

Family & Household Performance **(full scale from Chen et al., 2014)**

Instructions: Over the last week, do you think you have been:

Completion of Tasks

1. keeping up with your share of household chores?
2. maintaining things around the home?
3. handling financial matters in your family?
4. contributing to your family financially?
5. participating in childcare?

Maintenance of Familial Relationships

6. spending quality time with family members?
7. organizing family activities?
8. communicating with your family members?
9. providing emotional support to your family members?
10. providing general support to your family members?
11. giving advice to family members (if applicable)?
12. participating in family activities?
13. keeping family members connected with each other?
14. respecting your family members' time and space?
15. expressing your affection to other family members?
16. making decisions and solve problems together with your family members?
17. helping care for family members when they are sick?

Overall Well-Being **(Tennant et al., 2007)**

Instructions: Indicate how much the following statements apply to how you have been feeling overall in the last week.

1. I've been feeling useful.
2. I've been feeling relaxed.
3. I've been feeling interested in other people.
4. I've had energy to spare.
5. I've been dealing with problems well.
6. I've been thinking clearly.
7. I've been feeling good about myself.
8. I've been feeling close to other people.

9. I've been feeling confident.
10. I've been able to make up my own mind about things.
11. I've been feeling loved.
12. I've been interested in new things.
13. I've been feeling cheerful.

Table 1

Definitions of Cognitive Boundary Work Stages

Stage	Definition	Example
Anticipate Boundary Needs	Inventory upcoming work-family responsibilities and assess the degree of physical, temporal, and psychological borders that are inherently required to effectively perform each work and family task.	Expect to need a quiet office space next Monday during the hours of 9am-11am to focus solely on leading a work team meeting.
Boundary Planning	Identifying and evaluating alternatives to best meet boundary needs in light of one's context and constraints, and selecting a final boundary schedule that indicates where, when, and how the individual will fit together and engage in work and/or family role(s) throughout the day/week.	Decide to alternate between morning shifts (for multitasking light work and family duties) and afternoon shifts (for single tasking deep work time) with spouse.
Regulate Boundary Implementation	Managing adherence to the intended physical, temporal, and psychological boundaries by monitoring one's capacity (energy/attention) to stay in the correct mode and engage in work and/or family role(s) as prescribed as well as to maintain or re-establish boundaries through distractions, interruptions, and role transitions.	Actively try to stay mentally present and engaged in performing work role responsibilities until the end of the afternoon shift meant for deep work, in spite of being distracted and wanting to leave early for child's soccer game.
Boundary Adaptation	Processing boundary-laden experiences through self-reflection on the utility of their boundaries (i.e., for fulfilling work-family responsibilities and the sustainability of these boundary plans for their holistic needs); feeding these insights back into decisions about adjusting boundary work in pursuit of one's goals.	Realize that only 4 hours of focused deep work is feasible every day and it is easier in the morning; re-design configuration of boundaries to schedule deep work shift in the morning and move cross-domain multitasking to the afternoon.

Table 2

Study 2 Descriptive Statistics, Reliabilities, Correlations

	M	***SD***	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
1.CBW-Anticipate	5.39	.84	(.79)								
2.CBW-Planning	5.67	.81	.49**	(.73)							
3.CBW-Regulate	5.29	.93	.11	.07	(.81)						
4.CBW-Adapt	5.34	.97	.35**	.50**	.42**	(.88)					
5.CBW (full)	5.41	.64	.77**	.69**	.51**	.81**	(.87)				
6.Segment. Preferences	5.28	1.35	.03	.15	.04	.01	.07	(.91)			
7.Segment. Behaviours	2.90	.69	.02	-.11	.21**	.03	.05	.23**	(.80)		
8.Positive Affectivity	3.12	.82	.20*	.02	.38**	.27**	.32**	-.05	.13	(.93)	
9.Negative Affectivity	1.79	.69	.10	.24**	-.25**	-.02	.03	.01	-.17*	-.26**	(.90)

Note. "CBW" = *Cognitive Boundary Work* (based on final 22 items). Cronbach's alphas can be found in parentheses on the diagonal.
* $p < .05$, ** $p < .01$

Table 3

Study 2 EFA Results

Item	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
Anticipate 1	**0.35**	0.25	0.05	0.22	0.03	-0.03
Anticipate 2	**0.60**	0.19	-0.01	0.21	0.10	-0.17
Anticipate 3	**0.59**	-0.05	0.10	0.07	-0.14	0.08
Anticipate 4	0.02	**0.86**	-0.03	-0.14	0.12	-0.06
Anticipate 6	0.14	**0.60**	0.05	-0.01	-0.12	0.14
Anticipate 7	0.00	-0.08	**0.90**	0.01	0.00	-0.01
Anticipate 8	0.12	0.03	**0.77**	0.00	0.02	-0.03
Anticipate 9	0.00	0.06	**0.82**	-0.05	-0.04	0.02
Planning 1	0.16	0.06	0.05	**0.42**	-0.03	0.10
Planning 2	0.06	-0.12	0.02	**0.76**	0.01	0.04
Planning 4	0.04	-0.13	0.15	**0.54**	0.16	-0.03
Planning 5	0.17	-0.02	-0.21	**0.67**	-0.09	0.07
Regulate 1	0.00	-0.05	-0.04	0.01	**0.87**	-0.05
Regulate 2	0.03	0.11	0.01	-0.02	**0.54**	0.16
Regulate 3	0.06	-0.04	-0.03	-0.02	**0.76**	-0.01
Regulate 5	-0.23	0.11	0.06	0.09	**0.61**	0.08
Adapt 1	0.20	-0.21	-0.07	-0.10	0.06	**0.86**
Adapt 2	0.09	0.20	-0.08	-0.10	0.03	**0.74**
Adapt 3	0.22	-0.13	0.06	-0.10	0.11	**0.76**
Adapt 4	-0.21	0.00	0.00	0.21	0.10	**0.57**
Adapt 5	-0.16	0.15	0.07	0.10	-0.05	**0.70**
Adapt 6	-0.22	0.06	0.01	0.18	-0.13	**0.74**

Note. Factor loadings derived from rotated pattern matrix. Based on final 22 items.

Table 4

Study 3 Descriptive Statistics, Reliabilities, Correlations

	M	***SD***	**1**	**2**	**3**	**4**	**5**	**6**	**7**
1.CBW	5.40	.78	(.93)						
2.Segmentation Preferences	5.52	1.11	.16*	(.83)					
3.Segmentation Behaviours	3.27	.56	.15	.17*	(.69)				
4.Family Permeability	4.59	1.01	.24**	-.21**	-.10	(.67)			
5.Work Permeability	4.89	1.3	.01	-.02	-.49**	.27**	(.85)		
6.Positive Affectivity	3.41	.80	.26**	-.02	.22**	.04	-.13	(.94)	
7.Proactive Personality	5.27	.92	.54**	.09	.28**	.12	-.02	.51**	(.92)
8.Whole Life Perspective	4.22	.45	.35**	.15*	.05	.09	.13	.17*	.45**
9.Work-Family Demands	3.69	.55	.27**	.02	.20**	.20*	.05	.10	.33**
10.Age of Youngest Child	7.51	5.28	.00	-.07	.11	.03	-.04	.06	.04
11.Spouse Boundary Accept	3.41	1.02	.05	.16*	.01	-.00	.13	.11	.18*
12.Supervisor Boundary Accept	3.66	1.01	.02	-.01	-.14	.01	.26**	.10	.04
13.Gender	.56	.50	.09	-.10	-.08	.03	.08	-.11	-.05
14.WF Balance Effectiveness	3.97	.50	.30**	.03	.14	-.06	.06	.42**	.37**
15.Job Performance	5.82	.78	.18*	.11	.09	-.15	-.00	.21**	.20**
16.Family Performance	5.79	.70	.26**	.17*	.17*	-.11	.01	.33**	.33**
17.Well-being	3.58	.71	.18*	-.03	.24**	-.08	-.07	.80**	.46**

Note. "CBW" = *Cognitive Boundary Work* (full scale based on final 23 items). Cronbach's alphas can be found in parentheses on the diagonal.

* $p < .05$, ** $p < .01$

Table 4 (continued)

Study 3 Descriptive Statistics, Reliabilities, Correlations

	8	9	10	11	12	13	14	15	16	17
1.CBW										
2.Segmentation Preferences										
3.Segmentation Behaviours										
4.Family Permeability										
5.Work Permeability										
6.Positive Affectivity										
7.Proactive Personality										
8.Whole Life Perspective	(.73)									
9.Work-Family Demands	.27**	(.75)								
10.Age of Youngest Child	.12	-.03	–							
11.Spouse Boundary Accept	.13	-.03	.14	(.82)						
12.Supervisor Boundary Accept	.04	.01	-.03	.23**	(.89)					
13.Gender	.07	.05	-.08	-.02	-.00	–				
14.WF Balance Effectiveness	.38**	.04	.19*	.17*	.24**	-.02	(.87)			
15.Job Performance	.32**	-.03	.15	.07	.07	.06	.59**	(.75)		
16.Family Performance	.42**	.05	-.00	.04	.23**	-.08	.51**	.47**	(.77)	
17.Well-being	.09	.05	.10	.15	.20*	-.18*	.49**	.22**	.36**	(.92)

Note. "CBW" = *Cognitive Boundary Work* (full scale based on final 23 items). Cronbach's alphas can be found in parentheses on the diagonal.

* $p < .05$, ** $p < .01$

Table 5

Study 3 Multiple Regression Results

	Cognitive Boundary Work		Work-Family Balance		Job Performance		Family Performance		Well-Being	
Variables	*b*	*SE*	*b*	*SE*	*b*	*SE*	*b*	*SE*	*b*	*SE*
Proactive Personality	.46**	.06								
Whole Life Perspective	.18	.12								
Work-Family Demands	.20**	.09								
Age of Youngest Child	.01	.01								
Spouse Boundary Accept.	-.04	.05								
Supervisor Boundary Accept.	.02	.05								
Gender	.25**	.09								
Cognitive Boundary Work			.21**	.05	.22**	.08	.25**	.07	.21**	.07
R^2	.45		.11		.05		.08		.05	

Note. Antecedents of cognitive boundary work model was tested separately in a separate regression model from the outcomes of cognitive boundary work models.
* $p < .05$, ** $p < .01$

Table 6

Study 4 Descriptive Statistics, Reliabilities, Correlations

	M	***SD***	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
1.Cognitive Boundary Work	4.98	.90	(.94)								.30**	.35**	.31**	.27**
2.Proactive Personality	4.88	.94	.36**	(.92)										
3.Whole Life Perspective	4.20	.44	.30**	.38**	(.70)									
4.Work-Family Demands	3.78	.56	.32**	.33**	.32**	(.77)								
5.Age of Youngest Child	8.47	6.36	-.02	-.14**	-.18**	-.25**	–							
6.Spouse Boundary Accept	3.45	.97	.01	.01	-.04	-.12**	.24**	(.82)						
7.Supervisor Boundary Accept	4.02	.97	-.04	.01	.03	-.10*	-.04	.12**	(.92)					
8.Gender	.53	.50	.13**	.03	.16**	.12**	-.01	-.09*	-.01	–				
9.WF Balance Effectiveness	3.98	.55	.26**	.20**	.30**	-.01	.04	.09*	.23**	.02	(.91)	.61**	.53**	.52**
10.Job Performance	5.76	.97	.23**	.18**	.25**	.01	.08†	.13**	.07†	-.01	.65**	(.86)	.38**	.45**
11.Family Performance	5.59	.71	.32**	.22**	.35**	.04	-.06	-.03	.19**	.10**	.64**	.39**	(.90)	.55**
12.Well-Being	3.56	.70	.28**	.29**	.25**	-.07†	.10*	.14**	.11**	-.10*	.57**	.48**	.57**	(.93)

Note. Cognitive Boundary Work (full scale based on final 22 items). Gender was coded as 0 (men) and 1 (women). Cronbach's alphas can be found in parentheses on the diagonal; descriptives and reliabilities for weekly variables are presented at the between-person level. Within-person correlations are found above the diagonal.

† < .10, * $p < .05$, ** $p < .01$

Table 7

Study 4 Multilevel Modeling Results for Predictors of Cognitive Boundary Work

Variables	*Coefficient*	*SE*
Between-person Level		
Prediction of Random Intercept (β_0)		
Intercept (γ_{00})	1.48**	.39
Proactive Personality (γ_{01})	.21**	.04
Whole Life Perspective (γ_{02})	.29**	.08
Work-Family Demands (γ_{03})	.29**	.07
Age of Youngest Child (γ_{04})	.01*	.01
Spouse Boundary Acceptance (γ_{05})	.02	.03
Supervisor Boundary Acceptance (γ_{06})	-.02	.03
Gender (γ_{07})	.13*	.06
Residual Variance (σ_{u0}^2)	.47**	.03
Within-person Level		
Variance (σ_e^2)	.19**	.02

Note. N_{indv} = 613, N_{obs} = 1839. Level 1 (within-person level) equation: Cognitive Boundary Work = $\beta_0 + e$. For random intercept, Level 2 (between-person level) equation: $\beta_0 = \gamma_{00} + \gamma_{01}$(Proactive Personality) + γ_{02}(Whole Life Perspective) + γ_{03}(Work-Family Demands) + γ_{04}(Age of Youngest Child) + γ_{05}(Spouse Boundary Acceptance) + γ_{06}(Supervisor Boundary Acceptance) + γ_{07}(Gender) + u_0.

* $p < .05$, ** $p < .01$

Table 8

Study 4 Multilevel Modeling Results for Weekly Outcomes of Cognitive Boundary Work

	Work-Family Balance		Job Performance		Family Performance		Well-Being	
Variables	*Coefficient*	*SE*	*Coefficient*	*SE*	*Coefficient*	*SE*	*Coefficient*	*SE*
Between-person Level								
Prediction of Random Intercept (β_0)								
Mean (γ_{00})	3.98**	.02	5.76**	.04	5.59**	.03	5.56**	.03
Variance (σ_{u0}^2)	.09**	.02	.37**	.05	.23**	.03	.28**	.03
Prediction of Random Slope for Cognitive Boundary Work (β_1)								
Mean (γ_{10})	.13**	.03	.30**	.05	.18**	.04	.11**	.03
Variance (σ_{u1}^2)	.04**	.02	.26**	.09	.01	.01	.04**	.01
Within-person Level								
Variance (σ_e^2)	.16**	.02	.43**	.05	.21**	.02	.15**	.02

Note. N_{indv} = 615, N_{obs} = 1845. Level 1 (within-person level) equation: outcome = $\beta_0 + \beta_1$ (Cognitive Boundary Work) + *e*. For random intercept and random slope, Level 2 (between-person level) equations: $\beta_0 = \gamma_{00} + \mu_0$; and $\beta_1 = \gamma_{10} + \mu_1$.
* $p < .05$, ** $p < .01$

Figure 1: Data Structure of Qualitative Findings

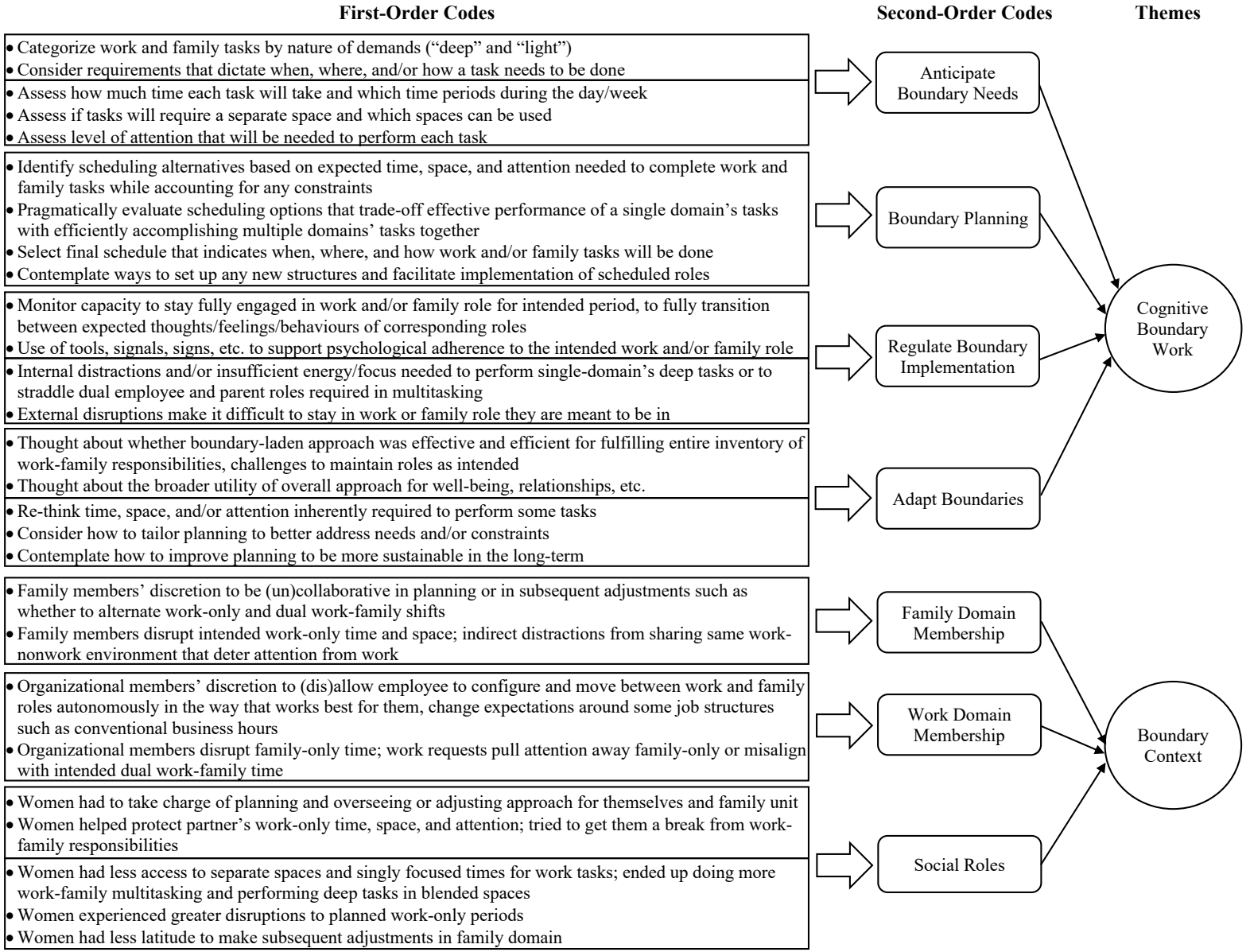
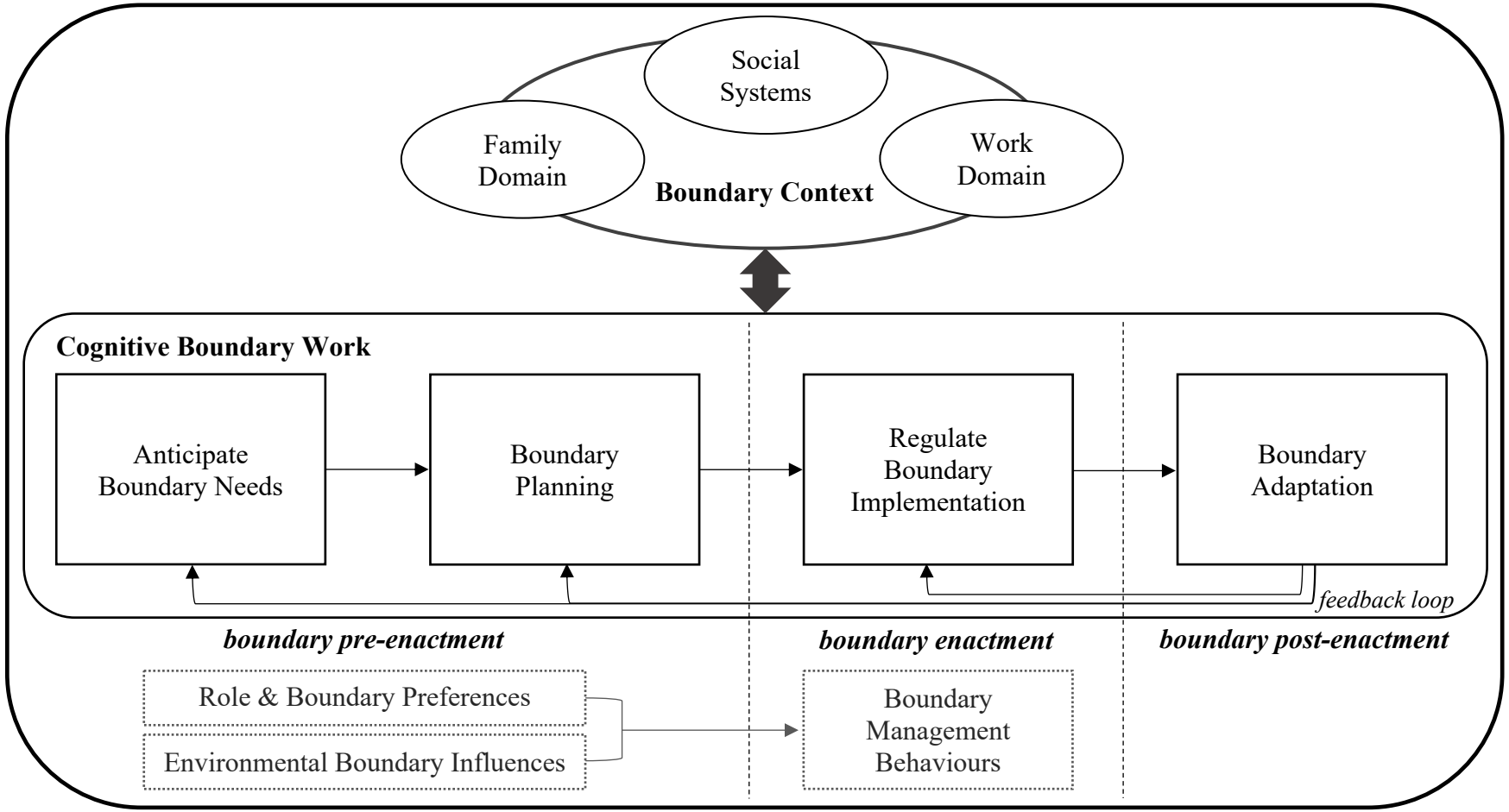


Figure 2: A Dynamic Process Model Elucidating the Role of Cognitive Boundary Work and Boundary Context



Note. Lighter dashed boxes represent existing boundary management constructs; these are incorporated to show how they fit together with new concepts and within the larger process of individual boundary work being proposed.

Figure 3: Hypothesized Model Tested in Studies 3 and 4