Boundary Theory and Work-Family Border Theory Research:
A Focus on Boundary Enactment
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INTRODUCTION

When we began this review, our intent was to update a review (Desrochers and Sargent 2003) published a few years after boundary theory (Ashforth, Kriener, and Fugate 2000; Nippert-Eng 1996) and work-family border theory (Clark 2000) had been introduced in the work-family literature. In gathering publications to read, it became apparent that the literature had changed so much in almost 20 years that a simple update would not do. It also became apparent that we could not cover all of that literature in a single brief review. Because of the growth in the research literature grounded in boundary and border theory, in both the number publications and diversity of topics, we decided to focus mainly on explaining boundary theory and reviewing the research literature on what is perhaps the most widely studied topic and the one associated with the most “terminological confusion” (Allen, Cho, and Meier 2014) in this literature: the enactment of work and family boundaries. The terminological confusion comes from the wide variety of concepts that includes the related topics of boundary characteristics (e.g., flexibility and permeability), work-family blurring, behaviors tied to boundary enactment (e.g., micro role transitions, multitasking, and working at home), and more recently developed constructs that can be seen as different types of enactment (e.g., cross-role interruptions, detachment from work, and work-family internal conflict). To address this terminological confusion, we propose three levels of enactment: psychological, behavioral, and external. It would be difficult to adequately discuss the research literature on enactment without addressing other topics that come up in each study. So, aside from our focus on enactment, we will briefly address other constructs as they come up, such as attitudes about the self (e.g., work and parent identities), attitudes about boundaries (e.g., integration/segmentation preferences), boundary resources (e.g., organizational, community, and institutional policies), and boundary strategies (i.e., styles and tactics).

BASIC CONCEPTS AND DEFINITIONS

Work-family border theory (Clark 2000) and boundary theory (Ashforth et al. 2000) were developed to focus on the integration and segmentation of work and family borders as a primary mechanism linking contextual factors to individual outcomes in each domain. Since their introduction, these theories have become a key part of the work-family literature (Allen et al. 2014; Bianchi and Milkie 2010; Kossek, Baltes, and
Matthews 2011) and are likely to continue to be important in the work-family literature. Both theories address how people construct, maintain, negotiate and cross the physical, temporal, behavioral, relational, or psychological "lines of demarcation between domains" (Clark 2000:756) or "limits that define entities as separate from one another" (Ashforth et al. 2000:474). Both theories propose permeability and flexibility as key components of boundaries. Permeability is the extent to which behavioral or psychological aspects of one role or domain are allowed to enter another (Ashforth et al. 2000; Clark 2000; Pleck 1977), so employees would have a highly permeable nonwork boundary if they are expected to respond to work-related texts and phone calls during off hours. Flexibility is the capacity of a domain or role’s boundary to expand or contract to accommodate the demands of another domain or role (Ashforth et al. 2000; Clark 2000; Hall and Richter 1988), so employees who are able to work at a time and place of their choosing to help manage family demands would have highly flexible work boundaries.

The two theories also share four general propositions (Ashforth et al. 2000, Clark 2000; Kreiner 2006; Nippert-Eng 1996). First, as is suggested in the examples above examples of permeability and flexibility, both theories acknowledge that the direction of influence between domains can be either symmetrical or asymmetrical (Allen et al. 2014). Second, they propose that boundaries or borders vary on a continuum from extreme integration (highly permeable and flexible borders, such as when telecommuters enact both work and family roles at home at varying times of day) to extreme segmentation (low border permeability and flexibility, such as when an employee commutes daily to work at the same times each day and same days each week). Third, integration and segmentation each involve different tradeoffs. For example, integrating work and family by working at home can make it easier to move between these domains, but without a clear separation between them (e.g., a temporal boundary imposed by a long commute), boundary management may require more deliberate attention (e.g., setting up a separate part of the home for work). Finally, either type of boundary enactment (integration or segmentation) can facilitate or undermine a person’s well-being, depending on a) the characteristics of the person (e.g., their preferences for integration versus segmentation, extent of influence of work or home domains); b) the perceptions or meanings the person attaches to work and family (e.g., the extent to which they identify with work and parent roles or see these as vastly different roles); c) contextual factors such as situational demands, constraints, and resources (e.g., long or irregular work hours, "family unfriendly" workplace norms, communication/information technologies that make work ever-present, policies or practices such as flextime that allow control over the work-home boundary, or social support from supervisors, coworkers, and family); and d) the fit between contextual factors and a person’s characteristics.

Allen and colleagues (2014) argue that the two theories are essentially the same and note that both influenced by the works of Nippert-Eng (1996) and by Hall and Richter (1988). Nevertheless, they each were also influenced by different theories. Ashforth and colleagues’ (2000) concept of role boundaries was based on role theory (Biddle 1979; Katz and Kahn, 1978), whereas Clark’s (2000) concept of domains was based on Lewin’s (1941) notion of regions of life spaces in field theory.

Boundary theory is a cognitive sociological theory of mental categorization (Zerubavel 1993; 1996). Christena Nippert-Eng (1996) was the first to apply that theory in a qualitative study of the symbols and identities tied to individuals’ work and home.
lives. Ashforth and colleagues (2000) further developed boundary theory from a general theory of categorization into a mid-range theory of micro role transitions. Using Katz and Kahn’s (1978) definition of roles as “the building block of social systems and the summation of the requirements with which such systems confront their members as individuals” (219-220), Ashforth and colleagues distinguish between macro role transitions such as retirement that involve beginning or ending a major lost-lasting life role, and micro role transitions such as a daily commute that involve frequent and recurring shifts between one’s roles. As suggested earlier, boundary theory proposes that telecommuters’ integrated work and family roles can facilitate micro transitions. However, without such structured transition rituals daily commute, workers may need to actively construct other transition rituals (e.g., gathering work materials, going to a designated work space at home) to psychologically prepare themselves to exit one role and enter another. Without such rituals, the theory proposes that work-family integration can lead to blurring of role boundaries, or the “perception of uncertainty or difficulty in distinguishing one’s work role and one’s family roles (e.g., as parent or spouse) that occurs when these roles are seen as highly integrated” (Desrochers, Hilton, and Larwood, 2005:2-3).

In contrast to boundary theory, roles are barely mentioned in Clark’s (2000) articulation of work-family border theory. Instead of using the concept of roles, work and family life are described in border theory as different domains. Domains are seen as social systems occupying specific places and times, involving particular people, and having a set of “rules, thought patterns, and behavior” (Clark 2000:753). Thus, domains, like roles, involve rule-bound systems and characteristic behaviors, but also seem to involve cognitions, people, spatial borders, temporal borders, and other contextual factors that may extend beyond roles and into other aspects of work and home life. Although transitions between work and family are addressed in border theory (and typically referred to as border crossings), the theory is primarily focused on work-family balance, or “satisfaction and good functioning at work and at home, with a minimum of role conflict” (Clark, 2000:751). As for integration and segmentation, these are equivalent to border strength. For Clark, the strength of borders is determined not only by permeability and flexibility, but also by the extent of blending, which is a combination of flexibility and permeability. The greater the flexibility and permeability, the greater the blending, and the greater the blending, the weaker the borders. But, for blending to not be redundant with boundary strength, perhaps it should be thought of not as a sum of flexibility and permeability but as a product of the interaction between them. Thus, perhaps Clark’s boundary strength can be seen as the sum of permeability, flexibility, and their interaction.

In sum, both theories have contributed to the work-family literature by defining what work and family boundaries are, describing their characteristics, and explaining the conditions under which either work-family integration or segmentation can improve or diminish individual well-being. Nevertheless, the theories were developed independently from both shared and divergent influences, and have some differences in outcomes of interest and terminology. It is important to be aware of these similarities and differences because even though both theories are sometimes cited in what has been referred to as the boundary theory literature (Allen et al. 2014), the boundary management theory literature (Cruz and Meisenbach 2018), and boundary scholarship (Ammons 2013), individual studies are typically grounded in either work-family border theory (e.g.,
Boundary Enactment and Boundary Management

The focus on flexibility, permeability, and other characteristics that define boundaries in early boundary research could be seen to suggest that these are the only ways to describe integration and segmentation, but boundary theorists have described and studied boundaries in other ways, such as the ways individuals attempt to manage or enact their work and home boundaries. Boundary management, or boundary work, has been a focus of the boundary and border theory literature from its beginnings. Nippert-Eng (1996) has defined boundary work as a set of behavioral and mental activities that make up the "the strategies, principles, and practices we use to create, maintain, and modify cultural categories" (7) to enable integration or segmentation. Nippert-Eng put forward two forms of boundary work: placement, which delineates work and home realms; and transcendence, which keeps the boundary "in place by allowing us to jump back and forth over it" (8). For example, a telecommuter may place a work boundary at home by establishing one room in the home as the office by asking family members not to disturb her when she is in that room. Thus, with effort, employees can maintain a clear work-family boundary that is adaptive to their needs, even with integrated boundaries. One set of mechanisms that aid in transcendence (otherwise referred to as micro role transitions border crossings) are transition rituals. Rituals such as putting on professional clothes or packing a briefcase are habitual, patterned behaviors signifying to the individual (and sometimes to others) that he or she is in the process of exiting one role and preparing to enter another (Ashforth et al. 2000). An example of the importance of transcendence can be seen in bed-and-breakfast innkeepers (Li, Miao, Zhao, and Lehto 2013). Boundary work can be difficult for them if they have to work irregular hours (e.g., checking in lodgers at unpredictable times), live at the inn, work with a spouse or family members, which could give them few opportunities to engage in transition rituals or control the placement of physical and temporal work-nonwork boundaries.

Boundary enactment can be seen as one aspect of boundary management. Clark (2000) described enactment as a process of creating borders “in which individuals take elements given in their environments and organize them in a way that makes sense” (p. 756). Since Clark also stated that the literature described borders as having physical, temporal, and psychological forms, it is reasonable to describe boundary enactment as having the same three forms (Allen et al. 2014). Allen and colleagues (2014) described enactment simply as the general use of integration or segmentation to manage work-family boundaries, and stated that enactment represents the extent to work individuals “actually keep work and family domains separate as part of an active attempt to manage work and nonwork roles” (106).

Other Aspects of Boundary Management

Enactment can be distinguished from other aspects of boundary management, including the situations that allow integration or segmentation such as flexible schedule policies (Rau and Hyland 2002), the capacity of employees to make use of these situations such as flexibility-ability (Matthews and Barnes-Farrell 2010), individuals’ perceptions of their access to these situations such as segmentation supplies (Kreiner 2006) and flexibility perception (Allen et al. 2013), and as well as an individual’s attitudes towards their work and home boundaries such as preferences for integration or
segmentation (Ammons 2013; Kreiner 2006) and flexibility-willingness (Matthews and Barnes-Farrell 2010).

Boundary theory has also proposed some ways that these different aspects of boundary management are linked. Recent developments in boundary theory propose that preferences for integration or segmentation moderate the impact of boundary enactment and segmentation supplies on a person's psychological well-being. Kreiner (2006) proposed that boundary management is incongruent when individuals' boundary preferences do not match with the segmentation supplies stemming from their perception of the affordances of their work and home environments. This lack of person-environment fit can result in work-family conflict and other negative outcomes. More recent scholarship argues that boundary management should be seen in terms of the fit or congruence of individuals' integration and segmentation preferences with their actual enactment of integration and segmentation (Allen et al. 2014; Ammons 2013) rather than with affordances of their environment. Of the different versions of this "boundary fit" perspective, the map of boundary management proposed by Allen and colleagues (2014) seems to be the most comprehensive. It addresses the match between boundary preferences and enactment on multiple levels (physical, behavior, and psychological), while specifying flexibility availability and supplies as a mechanism for environmental influences on the reality of individuals' work-family lives. This view of flexibility implies that it is not a characteristic of the work-family boundary afforded by flexible work schedules, teleworking options, and the like. Rather, a context of flexibility creates the resources and opportunities needed for employees to work out a fit between their boundary preferences and enactments. Thus, the difference between the person-environment fit perspective and the latter boundary fit perspective (Ammons 2013) is that in the latter, the enactment of integration or segmentation is disentangled from contextual factors, which are seen as constraints and affordances on boundary enactment. Put a different way, the person-environment fit perspective seems to presume that individuals will enact their preferred boundaries based on contextual factors such as employer practices and norms, or organizational and government policies, whereas the boundary fit perspective proposes that individuals may interpret such practices and policies a number of ways, so individuals in the same context may enact different work-family boundaries.

**IMPORTANCE OF TOPIC TO WORK-FAMILY STUDIES**

Pioneers in the work-family literature such as Pleck (1977) and Kanter (1977) recognized from the outset that work and family are not completely separate domains, but are connected by overlapping boundaries. But, for decades, the work-family boundary was only implied and not directly studied in research on the connections between work and family domains. For example, work-family conflict can occur when time-based, strain-based, or behavior-based demands of one role interfere with the enactment of another (Greenhaus and Beutell, 1985), and positive work-family spillover can when favorable attitudes, emotions, skills, or behaviors in one domain are transferred to another (Lambert, 1990). The work-family boundary is also implied in the advocacy of policies and practices designed to reduce work-family conflict or other forms of stress by “the challenge of integrating work and family life” (Bailyn, Drago, and Kochan 2001:2).

In recent decades this boundary has moved beyond being a metaphor for the connection between work and family experiences to a subject of theorizing (Ashforth et al. 2000; Clark 2000; Nippert-Eng 1996) and a substantial part of the work-family research
literature (Allen et al. 2014). Perhaps it is not a coincidence that this increased focus on work and family boundaries has emerged in the context of the ever-expanding access to mobile devices and other telecommunications technology that can make it possible to enact both work and family roles at almost any time and place (Chesley, Moen, and Shore 2003; Choroszewicz, and Kay 2020; Hughes and Silver 2019). With so many students learning virtually and employees participating in virtual meetings at home, these issues have become more salient during the Covid-19 pandemic (Hallin, 2020).

Effective boundary management, whether the focus is on enactment, supplies, preferences, person-environment fit, boundary fit, or boundary strategies, is thought to be associated with more positive affective outcomes than poor boundary management. As mentioned earlier, work-family balance is the primary outcome of interest in work-family border theory (Clark 2000), but border theory and boundary theory (Ashforth et al 2000) have been applied to a variety of other affective outcomes, such as work-family conflict (Schieman and Young 2010; Wang 2017), emotional exhaustion (Dettmers 2017; Halbesleben, et al. 2010; Sonnentag and Fritz 2007), job satisfaction (Zhao et al. 2019), family satisfaction (Desrochers et al. 2012), and life satisfaction (Hahn and Dormann 2013; Qiu and Fan 2015). Playing a less obvious role in boundary management are variables such as reactions to interruptions (Olson-Buchanan and Boswell 2006) and domain-specific goal obstruction (Hunter, Clark, and Carlson 2019) that may mediate the links between boundary management and affective outcomes.

**BODY OF KNOWLEDGE**

This section will review the major findings in the research literature on boundary enactment, so the main focus will be on studies exploring concepts relevant to that construct. Constructs not mentioned or rarely mentioned in early boundary scholarship will also be defined, discussed, and related to boundary enactment. These include concepts related to general boundary management processes such as boundary control (Kossek et al. 2012) as well as a wide variety of concepts related to enactment such as border collapse (Cruz and Meisenbach 2018). We begin with qualitative research, since that is where boundary theory began. Then, we turn to quantitative research on various topics pertaining to boundary theory.

**Qualitative Research**

Nippert-Eng's (1996) initial development of boundary theory was grounded in her qualitative study of the experiences of the work-home boundary among employees at a U.S. research laboratory. Nippert-Eng used interviews and observations of work and home contexts to examine how employees symbolically used actions (e.g., daily commutes to work) and self-relevant objects (e.g., calendars) to create work and home boundaries. Her findings suggested that boundaries were maintained through proactive boundary work, which was especially difficult for people who do a portion of their work at home. It also suggested that people differ in how they think about work and family, with some favoring integration and others favoring the segmentation end of the continuum. Finally, Nippert-Eng's study showed that this mental boundary was influenced by the structural characteristics of work and home such as the physical environment, the immediate social environment, and the larger cultural assumptions tied to each of these domains.

Two other early studies merit comment here, because they have collected both qualitative (and quantitative) data and because they were done before boundary theory
or work-family border theory had been formally established. Hill, Hawkins, and Miller (1996) studied mobile teleworkers and office workers at a large corporation. Mobile teleworkers reported greater flexibility than office workers, but this did not always seem to be beneficial. Although some teleworkers reported that their families thrived, others reported that their families struggled under this work arrangement because it "blurred the boundaries between work and family life" (293). Although this study was not informed by work-family border theory or boundary theory, the findings support the proposition that work-family integration can have either positive or negative outcomes for workers. An earlier study by Ahrentzen (1990) had similar implications for the concept of work-family blurring. She examined home workers’ creation of spatial, temporal, social, and behavioral boundaries, as well as its relationship with work-family role conflict and what she referred to as role overlap (a measure of the perceived blurring of work and family role boundaries in three separate domains: time, space, and the mind). She found that when home workers actively kept work and family domains separate (e.g., by maintaining a separate work space with restricted access from others in the home and adding rituals such as exercise when making transitions between domains) they experienced less blurring and less work-family conflict than those who did not engage in these practices.

Two recent qualitative studies grounded in work-family border theory and done outside of the US found similar evidences of the advantages and disadvantages of integrating and segmenting work and home life. Fedakova and Istonova (2017) explored the perceived tradeoff involved in working at home, flexible work hours, and other “new ways of working” (NWW:70) in a series of focus group structured interviews of 23 information technology employees in East Slovakia. Participants reported that NWW had disadvantages such as disruption of social life and children disrupting work duties, suggesting a blurring physical, temporal, and psychological boundaries. Karassvidou and Giaveli (2015) interviewed 20 mechanical engineers in a rapidly growing company in Greece. Participants viewed their employment as requiring strong, segmented work borders, and reported coping by getting support from family members and allowing their family borders to be permeable.

The above studies suggest that effective boundary management may inform more than a simple choice between overall work-family integration or work-family segmentation. Recent qualitative studies have begun to identify complex patterns in the activities involved in negotiating work-home boundaries that suggest and underlying strategy in boundary management, often involving various combinations of integration and segmentation, and various combinations of permeability and flexibility. Kreiner, Hollensbe, and Sheep (2009) interviews of Episcopal parish priests revealed four types of tactics that they used in their boundary work to decrease incongruence between preferred boundaries and those allowed by their work and home environments. Behavioral tactics involved social actions (e.g., getting help from other people) that served to construct and negotiate work and home boundaries. Temporal tactics making strategic decisions about how to use one’s time (e.g., choosing when to do work tasks). Physical tactics involve manipulating physical objects and spaces (e.g., building a fence between the church and the home) to better integrate or segment their work and home environments. Finally, they used communication tactics such as setting others’ expectations to send messages about their boundaries to others. Ammons (2013) interviewed 23 employees of a Fortune 500 company. Participants were asked about their preferred and enacted boundaries, their home and work space arrangements, and other questions about their work and
nonwork lives. Participants described four strategies of temporal, physical, behavioral, and cognitive boundary enactment and preferences that fell along a continuum from high integration for both work and family domains (holistic) to high segmentation (protecting family) in both domains. Holistic strategies were rare and limited to those who did not have children, whereas a protecting family strategy was the most common and involved mostly single people who either prioritized work over personal life or viewed them as incompatible. In the middle of the continuum were those with family-to-work integration but work-to-family segmentation (enhancing family) and those with the opposite pattern (above and beyond). An enhancing family strategy involved using some of their scheduled work time to do personal or family tasks and tended to be used by women who reported having demanding personal or family lives. Among those with an above and beyond strategy, some pursued it eagerly and tended to allow work life to cross family boundaries, and others pursued it reluctantly, seemingly as a necessity and generally not their preferred strategy. Ammons’ study serves as a reminder that integration and separation are best seen as a continuum rather than a binary.

Allen and colleagues (2014) argue that, in addition to tactics and strategies, individuals also use different styles in boundary management. Choroszewicz and Kay (2020) explored spatial, temporal, and psychological boundary management styles in their interviews of 34 Finnish and Canadian male lawyers, with a special focus on permeability. They found that participants had three types of styles in managing their work and family responsibilities. Struggling segmentors, who were mostly fathers of very young children, tended to keep impermeable physical and temporal work and family boundaries, in that they tried to keep work physically separate from family life, preferring to stay long hours at the office rather than bring any work home. Integrators, who were mostly senior lawyers with adult children, tended to make little distinction between work time and personal time. Struggling integrators, had minor children of varying ages, managed their work and family boundaries through a combination of integration (e.g., spanning physical boundaries with the use of mobile technologies such as cell phones) and segmentation (protecting time with their children).

Cruz an Meisenbach (2018) propose that boundary management may not be limited to segmentation and integration elements. In their in-depth qualitative interviews of 38 men and women who volunteered in their communities, they found that participants shifted among different types of boundary management, including segmentation, integration, and “collapsing boundaries” (182), with two forms of the latter. One form of collapsing boundaries involved simultaneously enacting different roles, such as when volunteering is an extension of one’s job. Although this is arguably an extreme form of integration from the perspective of work-family border theory in that it seems similar to the idea that extreme integrators make no distinction between domains (Clark 2000), Cruz and Meisenbach seemed to rely more on boundary theory (Ashforth et al. 2000) when they argued that integration does not involve simultaneous role enactment, but frequent micro role transitions. Another form of collapsing boundaries (role value fusion) involved advancing shared values (e.g., helping people) or skills (e.g., landscaping) in two or more roles. This latter concept seems similar to Bulger, Matthews, and Hoffman’s (2007) view that enhancement can result from participation in more than one domain. More generally, we believe that the entire concept of collapsed boundaries is really an extreme form of integration.
Quantitative Studies on Flexibility, Permeability, and Other Boundary Characteristics

In one of the earliest studies testing work-family border theory, Clark (2002a) constructed measures of the perceived flexibility and permeability of employees' work and family lives, seeking to determine which combination of flexibility and permeability would best help them reduce work-family conflict. She found that low permeability and high flexibility were associated with the lowest levels of work-family conflict. Findings from Rau and Hyland's (2002) research suggest that this link between low permeability and high flexibility with low work-family conflict may be moderated by the preferences of workers. Based on boundary theory, Rau and Hyland hypothesized that job applicants' preferences for jobs offering flextime or telecommuting over the standard 9 to 5 work arrangement would depend on their current levels of work-family conflict. Consistent with their hypothesis, Rau and Hyland found that applicants with lower work-family conflict preferred jobs offering telecommuting and those with higher work-family conflict preferred jobs that offered flextime. This suggests that the relationship between boundary characteristics (flexibility and permeability) and work-family conflict may vary with employees' boundary preferences. These preferences and the fit between preferences and perceived boundary characteristics have received special attention in the boundary theory research literature, but this is outside of the score of the current review.

More recent studies of flexibility and permeability reflect the recent trends of separate measures of these constructs for work and home borders, as well as treating conflict as directional construct. Qiu and Fan (2015) studied work-family conflict and life satisfaction among 278 Chinese employees. Their survey found that the positive relationship between family border flexibility and life satisfaction was mediated by lower work-to-family conflict and family-to-work conflict. They also found that this relationship was moderated by family permeability, such that those with by far the highest work-to-family conflict and family-to-work conflict were those with the combination of low family flexibility and high family permeability. Thus, their findings were somewhat consistent with those of Clark and of Rau and Hyland mentioned above, but they suggested that a somewhat different interaction between flexibility and permeability. So, when it comes to the family domain, it may not be so much the case that work-family conflict is best managed by the combination of high flexibility and low permeability, but that it is most aggravated by the combination of low permeability and low flexibility.

A study by Olson-Buchanan and Boswell (2006) measured permeability but not flexibility. They predicted that work-to-nonwork permeability would be positively associated with work-to-life conflict. They also explored another boundary construct drawn from previous research: role referencing. In confirmatory factor analysis, they found that work and nonwork role referencing loaded on separate factors from work and nonwork permeability. They defined role referencing as acknowledgement of one role domain while occupying a different role domain, and proposed that, as an aspect of integrated boundaries, role referencing tends to reduce the negative emotional impact of cross-role interruptions. Consistent with the studies reviewed above, they found that the greater permeability of the home domain to work elements predicted greater work-to-life conflict. They also found that greater role referencing predicted less negative reactions to interruptions from work to nonwork and from nonwork to work, but that permeability did not predict these outcomes. Thus, role referencing may be another characteristic of boundaries.
Quantitative Studies on Integration/Segmentation Enactment

The studies reviewed in the previous section examined permeability, flexibility, and role referencing as characteristics or components that describe the integration or segmentation of boundaries. Other quantitative studies have examined integration and segmentation enactment more holistically. However, only one study in our review used a scale that referred to the terms enactment and segmentation, and only two have done it using the term integration (Desrochers et al. 2005; Olson-Buchanan and Boswell 2006). Instead, most studies of enactment we reviewed have measured different constructs that we argue are essentially the same as integration/segmentation enactment, such as work-family role blurring (Glavin and Schieman 2012), boundary creation (Olson-Buchanan and Boswell 2006), work-family internal conflict (Carlson and Frone 2003), detachment from work (Sonnentag and Fritz 2007), (Olson-Buchanan and Boswell 2006), interdomain transitions (Desrochers et al. 2005; Matthews, Barnes-Farrell, and Bulger 2010), couple-linked work (Halbesleben et al. 2010), border tangibility (Li et al. 2013), boundary violation at work and home (Hunter et al. 2019), boundary management strategy (Kossek, Lautsch, and Eaton 2006), as well as work interrupting nonwork behaviors and nonwork interrupting work behaviors (Kossek et al. 2012). Together, these constructs seem to capture behavioral, psychological, and other facets of enactment.

Segmentation enactment. Powell and Greenhaus (2010) surveyed 528 managers and professionals. They constructed a measure of segmentation enactment by rewording Kreiner’s scale of segmentation preferences. The study found that segmentation enactment reduced both work-to-family conflict and positive work-to-family spillover. Zhao and colleagues (2019) conducted a survey in Beijing, China using Powell and Greenhaus’ segmentation enactment scale to explore segmentation as a moderating variable between work-to-family conflict and job satisfaction. They asked managers’ spouses, to report the manager’s segmentation enactment. They found that only among participants with high segmentation was work-to-family conflict associated with lower job satisfaction. This study’s treatment of segmentation as a moderator of work-to-family conflict’s impact rather than a predictor of conflict is unique in the boundary theory literature, and suggests that segmentation can influence individuals’ affective outcomes in a variety of ways.

Integration and blurring. Work-family blurring has been measured in different ways, and each of these can be considered a version of integration/segmentation enactment. Although the scale by Desrochers and colleagues (2005) has been used as a measure of integration/segmentation enactment (Halbesleben et al. 2010; Ilies, Wilson, and Wagner 2009; Kossek et al. 2012; Li et al. 2013), the Work-Family Integration-Blurring Scale (WFIBS) was originally conceived as a scale of work-family boundary ambiguity or work-family blurring (Desrochers and Sargent 2003). So, we will consider it here along side a scale of work-family role blurring by Glavin and Schieman (2012), which we feel is only a measure of integration enactment and not a measure of work-family blurring.

Consistent with their definition of work-family blurring (see above), Desrochers and colleagues’ (2005) WFIBS included items measuring the perceived clarity of the work-family boundary. They found that greater blurring, or integration enactment, was associated with greater work-family conflict, a greater number of work-family transitions made when doing paid work at home, and a higher number of hours spent doing paid work at home. Desrochers led another study using a sample of 403 dual earner couples (806 individuals), the WFIBS was positively associated with number of hours working at
home, positive and negative work-to-family spillover, negative emotionality and use of technology to balance work and personal life, and negatively associated with reported success in using technology to balance work and personal life for both husbands and wives (Desrochers and Sargent 2004). A third study of 85 employees at two California firms led by Desrochers found that, as predicted, the WFIBS was positively associated with work-home integration (a summative measure of the work and home permeability and flexibility measures by Clark, 2002b) and negatively associated with a preliminary version (Kreiner, 2002) of Kreiner’s segmentation supplies scale (Desrochers and Sargent 2004). A fourth study led by Desrochers found that scores on the WFIBS predicted family satisfaction, but only as a crossover effect (Desrochers and Sargent 2004). Desrochers and colleagues’ (2012) study of dual-earner parents found that fathers’ family satisfaction was predicted by their spouse’s integration enactment (WFIBS scores). All of the above studies were cross-sectional, so the prediction of satisfaction and other affective variables by the WFIBS should be interpreted with caution. The case for affect-related variables being outcomes rather than predictors of integration enactment is made stronger with longitudinal data. A study by Ilies and colleagues (2009) provided such evidence. They found that integration enactment (as measured by the WFIBS) magnifies the impact of high job satisfaction on positive affect at home and low job satisfaction on negative affect at home (2009). In a panel study of 484 working adults, Halbesleben and colleagues (2010) found that participants’ emotional exhaustion at time 2 was predicted by their scores on the WFIBS at time 1. They also found that WFIBS scores mediated the link between time 2 emotional exhaustion and the interaction between spousal instrumental support and whether or not the spouses worked in the same workplace or occupation. Another study (although not longitudinal) also explored scores on the WFIBS as an intervening variable. Li and colleagues (2013) found that integration enactment mediated the link between physical/temporal/reational borders (border tangibility) and work-family balance. Taken together, the above studies suggest that the WFIBS is highly associated with a variety of boundary enactment constructs, can predict affective outcomes for individuals, and can operate as an intervening variable (probably in a manner similar to other boundary enactment variables) between in work-family conflict, work-family spillover, and other linkages between work and family domains.

Although Glavin and Schieman drew upon Desrochers and colleagues’ (2005) definition of work-family blurring, they measured blurring differently. Rather than measuring the perceived clarity of work and family boundaries, they included two items that involve work-family multitasking and psychological absorption with work (see below) and one that was conceptually similar to permeability. As we will argue later in this review, these items tap onto other aspects of enactment rather than work-family blurring. That said, the study found work-family blurring was positively associated with work-family conflict and moderated the impact of job demands and resources on work-family conflict (e.g., work pressures magnified the impact of integration on work-family conflict, whereas decision-making latitude reduced it).

Like several other constructs discussed in this section, Allen and colleagues (2014) see work-family blurring as redundant with integration enactment, both conceptually and operationally. This view questions boundary theory’s tenet that blurring is a consequence of integration, but it has merit. Close examination of the two extant measures of work-family blurring seem to also involve integration enactment. Glavin and Schieman’s (2012) scale includes an item similar to what Allen and colleagues (2014) have argued should be considered permeability (“How often do coworkers, supervisors, managers, customers, or
clients contact you about work-related matters outside normal working hours” (79) and an item that seems to measure behavioral integration of work and home tasks (“How often do you try to work on job tasks and home tasks at the same time while you are at home?”) (80). Similarly, Desrochers and colleagues’ (2005) WFIBS includes an item that explicitly mentioned integration (“I tend to integrate my work and family duties when working at home.”) (453) and one that addresses segmentation (“In my life, there is a clear boundary between my career and my role as a parent”) (453). Furthermore, a more generalized version (Desrochers and Sargent 2004) of the WFIBS (which deletes “when working at home” and replaces “my career and my role as a parent” with “work and family”) was found to be associated with Clark’s (2002b) measures of home boundary flexibility and permeability (but not work permeability and flexibility). Thus, current measures of work-family blurring might more accurately be described as measures of integration/segmentation enactment.

In defense of the work-family blurring construct, qualitative research suggests that work-family blurring is an intuitive concept for border crossers. In a study of teleworkers during the coronavirus pandemic, Hallin (2020) asked one central question (before a set of follow-up questions): “Could you describe how your experience of working from home during the Coronavirus pandemic looks like?” (11). One of the themes that emerged from this question was that in light of the circumstances created by working at home (e.g., the lack of physical separation of work and home life and the varying breaks as well as start and stop times for work), teleworkers reported a sense of blurred boundaries between work and personal life. Similarly, in their qualitative study, Kreiner and colleagues (2009) reported that “several interviewees spoke of inviting parishioners to their homes for socials, dinners, meetings, and partied in order to blur the boundary between their homes and the church building” (722).

Boundary creation. In addition to the aforementioned examination of role referencing and permeability as components of integration/segmentation, the study by Olson-Buchanan and Boswell (2006) constructed a measure of boundary creation around the use of communication technologies to do work during nonwork hours. We argue that it was essentially a home segmentation from work enactment scale. They found that using communication technology to do work during nonwork time was negatively associated with both permeability and role referencing.

Psychological detachment from work. Psychological detachment from work seems to be another work segmentation enactment scale, but one that operates on a purely psychological level—specifically through preventing psychological absorption since it involves mentally disengaging from work when one is not at work (Sonnentag and Fritz 2007). Sonnentag and Fritz’s psychological detachment from work has generated a considerable amount of research grounded in boundary theory. Sonnentag and Fritz developed and validated their scale as one of four measures of work recovery experiences. They found that psychological detachment from work was negatively associated with time pressure, emotional exhaustion, health concerns, and depressive symptoms. In a longitudinal survey of 423 employees of companies in Shanghai, Wang (2017) found that family support reduced the negative impact on technology use for work at home during off hours on psychological detachment, and that psychological detachment predicted work-family conflict. Wang argued that this is consistent with work-family border theory (Clark 2000) in that technology use for work outside physical and temporal borders for work increases the opportunity for work to interfere with family.
In an online survey of managers and their employed spouses, Hahn and Dormann (2013) found that greater psychological detachment from work among employees and their spouses predicted greater life satisfaction for employees. Dettmers (2017) conducted a three-wave online panel study of 416 German workers that examined the impact of being expected to be available to work during off hours. They found that psychological detachment from work during off hours mediated the impact of extended work availability on emotional exhaustion.

**Work-family internal conflict.** Allen and colleagues (2014) note that work-family internal conflict and psychological detachment from work seem to represent opposite ends of the same continuum of permeability. Carlson and Frone (2003) developed their scale of work-family internal conflict as a psychological parallel to their measure of behavioral work-family conflict. Their exploratory factor analysis of the 12 items they created showed revealed that the two work-family internal conflict factors (internal family interference with work and internal work interference with family) loaded on separate factors from the two work-family external conflict factors (external family interference with work and external work interference with family). Aside from the results for work-family external conflict (which are outside of the scope of this review), Carlson and Frone found that internal work interference with family was positively associated with psychological involvement with work, but internal family interference with work was unrelated with psychological involvement with family. Although the latter work-family external conflict factors seem consistent with how work-family conflict is typically measured (in that the scale items mention cross-domain “interference”), we feel that the work-family internal conflict factors measure cross-domain psychological absorption rather than a cognitive version of work-family conflict (in that they ask participants if they “think about” the other domain rather than asking if such thoughts create interference between domains). Indeed, Carlson and Frone (2003) conceptualize internal work-family conflict as “preoccupation with one domain of life ..while within the role boundaries of another domain of life” (518). Although both the psychological detachment scale and the work-family internal conflict scales seem to measure psychological absorption, the work-family internal conflict scale has not generated as much research. Perhaps the only boundary theory study to date that uses Carlson and Frone’s scale was by Park and Jex (2011). Park and Jex used Kreiner’s (2006) work and home segmentation preference scales in a survey of work-family internal conflict in office workers. They also adapted Olson-Buchanan and Boswell’s (2006) scale to measure boundary creation around the use of communication technologies to do work during off hours and extended it to nonwork tasks during work hours to create measure of both work and home segmentation enactment. They found that boundary creation around technology use mediated the relationship between work and home segmentation preferences and work-family internal conflict. But, it should be noted that work-family internal conflict can be seen as a form of integration enactment and was highly negatively correlate with work and home boundary creation. So, this study can be interpreted to show that segmentation preferences predicted integration enactment and segmentation enactment.

**Boundary management and cross-role interrupting behaviors.** Kossek and colleagues (2006) collected survey and interview data from 245 employees from two large firms with telecommuting policies. The study examined boundary management strategies and perceived job control as predictors of work-family conflict, turnover intentions, and self-rated depression. Examination of items in the boundary management scale (see
Appendix for examples) reveals that it was essentially a measure of integration/segmentation enactment, with higher scores indicating integration enactment. Boundary enactment was found to predict family-to-work conflict, but not work-to-family conflict, turnover intention, or depression. In comparison, perceived job control predicted all outcomes except work-to-family conflict. Several years later, Kossek further develop a measure of boundary management characteristics that divides the construct into three subscales: work interrupting nonwork behaviors, nonwork interrupting work behaviors, boundary control, work identity, and family identity (Kossek et al. 2012). The first two, which they refer to collectively as measures of cross-role interruption behaviors, can be seen as measures of boundary enactment. So, it made sense that they used another measure of boundary enactment as part of their effort to validate their boundary management subscales, and not surprisingly, both directions of cross-role interrupting behaviors and nonwork interrupting were highly positively corrected with this scale. Unfortunately, Kossek and colleagues (2012) misattributed this scale to Ilies and colleagues (2009), when it was actually the WFIBS (mentioned above), originally created by Desrochers and colleagues (2005).

**Boundary violations.** Hunter and colleagues (2019) characterized boundary violations as similar to cross-role interruptions. They used a daily diary method to measure (for both work and home domains) boundary violations, goal obstruction/facilitation (the extent to which the violations obstructed or facilitated the meeting of work or family goals), and affective states (positive and negative affect following boundary violations, work-family conflict, work and family satisfaction) over a 10-day period. The boundary violations scale assessed the extent to which cross-domain interruptions occurred, so it is consistent the concept of integration enactment. The study found that boundary violations in the workplace predicted family-to-work conflict, partly through goal obstruction and negative affective reactions to violations; it also found that boundary violations at home predicted work-to-family conflict, partly through goal obstruction.

**Research on Behavioral Aspects of Integration Enactment: Transitions, Multitasking, and Working at Home.** Micro role transitions can be seen as a part of integration/segmentation, or as an outcome of it. Studies have examined the nature of work-family transitions and their frequency. Campos and colleagues (2009) used naturalistic observation to study work-family transitions in 32 dual-earner couples with children. Observers coded five different types of behaviors among family members that happened within two minutes of mothers or fathers returning home from work: positive behaviors (e.g., expressions of affection), negative behaviors (e.g., anger directed at the returning parent), distraction (e.g., ignoring the returning adult), logistic behaviors (e.g., asking questions about the returning parent’s household tasks), and reports of information about the events of the day. Campos and colleagues found that mothers tended to be greeted mostly with positive behaviors and reports of information, whereas fathers were most likely to be greeted with positive behaviors and logical behaviors. Later in the evening, mothers tended to interact with their children, whereas fathers tended to be alone. This focus on family members is consistent with Clark’s (2000) emphasis on the importance of studying other members of the each domain in work-family border crossings.

Transitions have been measured in survey research with psychometric scales and with self-administered time charts. Matthews and colleagues (2010) developed a 20-item scale that measured psychological and physical aspects of work-family transitions.
Desrochers and colleagues (2005) asked participants to complete a time chart for the most recent day that participants spent at home. For each waking hour of the day, participants were asked to check off one primary task they worked on from a list that included child care, several home chores, and several work-related tasks. Work-family transitions were calculated by counting the number of times participants switched from a child care or home chore task to a work task, or vice versa. The number of work-family micro transitions was found positively associated with work-family blurring (scores on the WFIBS).

Transitions can also be measured using daily diary or experience sampling methods. Delanoeije, Verbruggen, and Gervayes (2019) used questionnaires via email to collect daily diary data from 81 Flemish employees with parental responsibilities and assessed the impact of segmentation preferences and teleworking from home. Most participants reported less work to family conflict when they made more work to home transitions while at home. A major element in this finding was that flexibility and preference availability lead to smoother transitions. It was also surmised that this ease in transition between demands can easily create a permeability of boundaries that becomes detrimental to the work environment.

Couple-linked work and boundary tangibility. Working with a spouse or other family member, whether it involves working for the same employer at the same job site (Moen and Sweet 2002) or running a family business (Marshack 1994) can mean that work-related behaviors and family-related behaviors are so enmeshed that accomplishments and failures in one domain are nearly inseparable from those in the other. As mentioned earlier, Halbesleben and colleagues (2010) used the WFIBS as a measure on integration enactment. In a separate 103 married nurses within the same article, they also asked participants about whether or not they work in the same profession and for the same organizations. This couple-linked work status can be seen as another type of integration enactment, which is consistent with their finding that, compared to spouses who work in different places and occupations, spouses sharing the same workplace or occupation had greater integration enactment.

Border tangibility (Li et al. 2013), like the concept of border collapse mentioned earlier, seems to represent an extreme form of integration enactment. Using a set of items that ask about basic distinctions (or lack thereof) between where they work and where they live (physical border tangibility) and between work and nonwork hours (temporal tangibility), as well as a question about whether or not they work with a spouse or family members (relational tangibility), Li and colleagues found that bed-and-breakfast innkeepers with more tangible borders had greater work-family balance.

**IMPLICATIONS FOR RESEARCH AND PRACTICE**

In their review of the research literature, Allen and colleagues (2014) made several recommendations for future research informed by boundary theory and work-family border theory. We address three of them here. One recommendation was to include more cross-national and cross-cultural research. Another recommendation was for future research to use more multisource and more event-based experience sampling data. A third recommendation was to bring order to the “proliferation of constructs” (103) in the boundary literature. We add a fourth recommendation: linking boundary work to larger social ecologies than just organizations and families. After discussing the strides the literature has made in the first two recommendations and the fourth one, we
devote the remainder of this section toward the third recommendation by proposing a model of boundary enactment that we feel unpacks and expands upon Allen and colleagues’ (2014) proposed boundary management map as it applies to boundary enactment.

**Sampling From More Diverse Populations**

Several boundary scholars (Allen et al. 2014; Kossek et al. 2011) have suggested that future work-family research should be more international and cross-cultural. It appears that this has already begun. Boundary theory and border theory have been applied to an increasingly diverse array of populations and settings than in previous years. The literature drawing upon these theories is becoming increasingly international and has expanded beyond professional, white, middle class, populations. Several of the studies in our review (e.g., Dettmers 2017; Fedakova and Istonova 2017; Qiu and Fan 2015; Wang 2017; Zhao et al. 2019) were conducted outside of the US.

Allen and colleagues (2014) suggested that future research could shed new light on boundary management if it explores cases of extreme separation such as commuter marriages (couples who live apart, often because of their careers) and extreme integration such as couples in work-linked relationships. Both situations involve boundary management not only for individuals, but for part of all of a family unit. For example, managing work-family integration among those in a live-in family businesses such as running a bed-and-breakfast (Li et al. 2013) must be done in coordination with a spouse, children, or other live-in family partners. In research on boundary enactment little attention has been paid to the impact the children have on the boundary’s success. Although the topic of children came up in several qualitative interview studies in this review (e.g., Choroszewicz and Kay 2020, Fedakova and Istonova 2017; Kreiner et al. 2009), and several quantitative studies used samples of parents and included measures that made some mention of children (e.g., Desrochers et al. 2005; Hahn and Dormann 2013), only one directly studied children. Campos and colleagues (2009) observed parents’ interactions with their children when returning home. Boundary enactment may prove to be substantially different when children are involved. The age of children could be important as well. A toddler requires more attention on a sporadic schedule while older children may present other kinds of challenges. Future research on this element of home life may give us yet another area of further focus to further understand boundary enactment. Children may also be an import part of multi-source data, as we discuss in the section on methodology.

**Studying Larger Social Ecologies**

Most of the studies in this review focused on work and family domains. Voydanoff (2005) suggested expanding the scope of work-family research to better understand the work and community predictors of family well-being outcomes. Specifically, she suggests that researchers address both work-family conflict and work-family facilitation as proximal predictors of family role performance and child development outcomes, and how both are predicted by within-domain and boundary-spanning demands and resources from work as well as the larger community. She also proposed that the impact of work demands and resources on conflict and facilitation can be moderated by within-domain community demands (e.g., time spent volunteering, unsafe neighborhood) and resources (e.g., community services, friend and neighbor support) as well as boundary-spanning demands (e.g., job requires community involvement) and resources (e.g., child care or
nder care programs). Few studies have attempted to include community resources and demands as part of the context of boundary management (e.g., Cruz and Meisenbach 2018; Desrochers et al. 2012), and we recommend that more do so in the future.

Beyond local communities, Piszczek and Berg (2014) seek to further expand the scope of boundary theory to local, national, international regulative legal institutions such as medical leave, paternity leave, and work hour regulations. They propose that such institutions directly influence individuals’ integration/segmentation preferences and indirectly (through their impact on human resource practices in organizations) influence individuals’ integration/segmentation supplies.

Methodology

Like the work-family literature as a whole (Bianchi and Milkie 2010; Kossek et al. 2011), most of the quantitative research grounded in boundary or border theory has been done using single-source cross-sectional surveys, so Allen and colleagues (2014) recommend that future studies collect data from not only individual employees, but also their spouses or children. Some of the studies in this review gathered data from both spouses (e.g., Desrochers et al. 2012), and more such studies should be done in the future. But, perhaps the more pressing need is for multisource boundary research that includes children. Allen and colleagues also recommend that future research use event-based experience sampling methods. The study by Hunter and colleagues (2019) used a daily diary method, another name for experience sampling. One possible topic of future experience sampling research could be psychological work-family blurring. If this construct is indeed a subset of integration enactment, it would seem to be one that fluctuates daily based on current circumstances. To measure it as a state, rather than a trait, researchers could construct moment-specific items such as “At this moment, it is hard for me to say if I think of myself more as a spouse or more as an employee,” or “I feel confused at the moment about whether I am a parent or an employee.” It is not hard to imagine how answers to such questions could change daily or hourly for those who work at home or those who are in a small business with family members.

In addition to the recommendations of Allen and colleagues (2014), we would add, as others have for the work-family literature as a whole (Kossek et al. 2011), that future boundary theory research should include more longitudinal surveys. Some of the surveys in this review were longitudinal (e.g., Halbesleben et al. 2010; Ilies et al. 2009; Wang, 2017), but most were cross-sectional. As has been suggested at several points in this review, boundary enactment, as well as boundary management in general, tends to be seen as an intervening variable (sometimes a mediator, sometimes a moderator) that links the demands and resources of one domain to outcomes in another. Such a proposition can not be fully tested without longitudinal or experimental data.

Experiments are rare in boundary theory research, but we did find one experiment grounded in boundary theory. In the first of two studies (the second being a survey, reviewed earlier), Zhao and colleagues (2019) randomly assigned Chinese married managers (28 women and 32 men) to conditions of high or low work-to-family conflict. Level of conflict was manipulated through scenario instructions that asked participants imagine themselves in the high or low situation being described. They found that the relationship between work-to-family conflict and job satisfaction was moderated by the extent to which participants believed that the conflict situation would pose a threat to their families. Future experiments could explicitly study boundary management by randomly assigning participants to integrating or segmenting enactments and measuring,
measuring their boundary management preferences as possible moderators, and measuring one of any number of affective variable (e.g., work-family conflict) as dependent variables.

Rethinking Key Constructs in Boundary Theory and Work-Family Border Theory

Like the work-family literature as a whole (Kossek et al. 2011), the boundary theory literature suffers from a construct clarity problem regarding boundary enactment. Allen and colleagues (2014) have questioned the interpretation of some of the concepts used in the boundary theory literature such as flexibility, permeability, and work-family blurring. We will begin by briefly addressing flexibility, because we agree with Allen and colleagues that recent developments in the boundary literature suggest that flexibility should be considered a resource for effective boundary management rather than an aspect of boundary enactment.

Drawing upon Matthews and Barnes-Farrell's (2010) distinction between flexibility-willingness and flexibility-ability, they argue that the former is similar to integration/segmentation preference. They propose that flexibility moderates the relationship between boundary preferences and boundary enactment, such that those with greater flexibility-ability are more likely to be able to create a good fit between their integration/segmentation preference and enactment. This is not inconsistent with the statement we made earlier about Clark’s (2000) concept of blending being a function of permeability and flexibility.

As for permeability, Allen and colleagues (2014) argue that this too overlaps with other constructs. Thus, they suggest that permeability be seen as a latent variable that underlies interruptions, micro role transitions, and work-family internal (cognitive) conflict (which they say is similar to a lack of psychological detachment from work). This would make permeability a multi-level construct, involving social, behavioral, and cognitive aspects. That this view of permeability fits somewhat with their physical, behavioral, and psychological levels of their boundary management map suggests that they believe that permeability should continue to be a defining feature of integration/segmentation enactment and preferences. But, we feel that it needs to be stated that permeability is not the only concept in the boundary literature that has been measured in a way that seems to cut across behavioral, psychological, and other levels of enactment.

If Allen and colleagues (2014) are successful in persuading future boundary scholars to eliminate flexibility as a component of integration/segmentation enactment, what should replace it? One possibility is role referencing. Olson-Buchanan and Boswell (2006) measured what they referred to as two aspects of integration/segmentation (supported by confirmatory factor analysis): permeability and role referencing. However, a better solution may be to move past the construct of boundary characteristics entirely. If one examines items used to measure permeability and role referencing, they fit well with other items that we have argued are measures of boundary enactment.

Allen and colleagues (2014) rightly stated that work-family blurring, work-family internal conflict, detachment from work, permeability, role referencing, micro role transitions, and cross-role interruptions can all be seen as aspects of boundary enactment. As mentioned earlier, we would add a decades-old construct (psychological absorption) as well as several more recently measured constructs to that list: border
Based on the theory and research in this review, we have reorganized items from the scales measuring the above constructs to fall under the categories of psychological, behavioral, and external boundary enactment, each with their own subcategories. This proposed three-level typology of enactment is further explained below and illustrated in the Appendix. The Appendix groups scale items from several constructs in the literature into a set of psychological, behavioral, and external levels of integration/segmentation enactment.

**Components of psychological boundary enactment.** The psychological dimension of boundary enactment involves the cognitions individuals use to envision work and family boundaries, contrast domains, mentally cross domains, and otherwise mentally integrate or segment work and home. It consists of cross-domain psychological absorption (thinking about work after work is over, or about family while at work) and cognitive work-family blurring (which spans the work-family border).

Contrary to Allen and colleagues (2014), we believe that the concept of work-family blurring still has merit, but it may be necessary to rethink this concept and how it is measured. If one restricts blurring to the individual’s perception of role or domain boundary confusion (arguably the core of this construct), there is still a part that blurring can play in the boundary literature. By this reasoning, blurring can be seen as a psychological component of integration, rather than a consequence of it. If that is the case, perhaps the construct should be measured not with behavioral items such as multitasking or items that mention physical or temporal overlaps such as working at home (Schieman and Young 2010), but strictly with cognitive items that capture an individual’s confusion about the line of demarcation between domains, such as “it is often difficult to tell where my work life ends and my family life begins” (Desrochers et al. 2005:453). Since Li and colleagues (2013) stated that their measure of relational border tangibility seemed to be the only existing measure of psychological work-family integration enactment (which we disagree with; we would locate it with relational external enactment), a purely cognitive psychological measure of work-family blurring could add a useful subscale to a more comprehensive inventory of work-family boundary enactment in future research. Until such new scales of work-family blurring are developed, we agree with Allen and colleagues that because current measures of blurring (Desrochers et al. 2005; Glavin and Schieman 2012) assess multiple dimensions (psychological, behavior, physical, etc.), they should be treated as brief but global measures of integration/segmentation enactment. In addition to measure of blurring, we argue that other measures in the literature should be considered measures of integration enactment, including Kossek, Lautsch, and Eaton’s (2006) boundary management strategy scale, Kossek Sonnentag and Fritz’s measure of psychological detachment from work measure aspects of integration/segmentation enactment. These, along with Clark’s (2002b) measures of work and home boundary permeability and flexibility, provide researchers with a wide variety of measures of integration/segmentation enactment. Future research should attempt to pare this down to one or two widely accepted and strongly validated measures that capture psychological, behavioral, and contextual aspects of integration/segmentation enactment.

Like work-family blurring, we believe that psychological absorption is a construct that has merit as an aspect of psychological boundary enactment. Citing Kanter (1977)
and others, Small and Riley (1990) noted that some of the early work-family scholarship mentioned psychological absorption as a way that work can spillover into home life. Small and Riley define this as becoming “mentally preoccupied with work concerns, even when not at work” (51). Small and Riley’s 20-item work spillover into family life scale measured psychological absorption as well as time-based, energy-based, and general ways that work was seen as interfering with home or family life. Grzywacz and Marks’ (2000) negative work and family spillover scales were developed along similar lines. That psychological absorption can pertain to both spillover and psychological boundary enactment may raise questions about whether or not there is a difference between spillover and psychological enactment. We believe that the difference is that in spillover, psychological absorption involves interference due to affective reactions (e.g., Small and Riley’s item “Worrying about my job is interfering with my relationship with my spouse”:53; Grzywacz and Marks’ item “Personal or family worries and problems distract you when you are at work”:114), whereas in psychological enactment, we propose that absorption involves merely thinking about the domain that one is not currently occupying (e.g., Glavin and Schieman’s 2012 item “How often do you think about things going on at work when you are not working?”:80). Put another way, when cross-domain psychological absorption results in cross-domain interference, spillover has happened.

Psychological absorption seems to have been subsumed in recent years under other constructs such as work-family internal conflict (Carlson and Frone 2003) and detachment from work (Sonnentag and Fritz 2007). We propose that cross-domain psychological absorption can have two types: 1) work absorption when in the nonwork domain, which is defined as psychological absorption with work life when one is not at the workplace or otherwise not engaging in the tasks of one’s job or career; and 2) nonwork absorption when in the work domain, which is defined as psychological absorption with nonwork life when one is at the workplace or otherwise engaging in the tasks of one’s job or career.

Components of behavioral boundary enactment. The behavioral dimension of boundary enactment involves all actions taken to enact integration or segmentation. Behavioral boundary enactment varies by the extent to which individuals choose to engage in cross-role actions (e.g., doing work activities while at home) and boundary-spanning actions. For the sake of clarity, cross-role actions can be divided into two types: 1) work-related actions outside of the workplace, which involve the extent to which actions done outside of the workplace enact work roles, including behaviors such as writing work-related reports while at home, choices to allow interruptions such as accepting work-related phone calls at home, and role referencing such as talk with a spouse or other family member about work-related issues; and 2) nonwork-related actions at the workplace, which involve the extent to which actions done in the workplace enact nonwork roles, including behaviors such as scheduling appointments for one’s children, choices to allow interruptions such as accepting family-related phone calls at work, and role referencing such as talk with coworkers about family or personal life while at the workplace. Boundary-spanning actions include behaviors involved in making intentional micro role transitions, simultaneously enacting both work and family roles, or otherwise creating, maintaining, or modifying both work and home boundaries.

Components of external boundary enactment. We share with Allen and colleagues (2014) the view that enactment has psychological and behavioral forms. However, we depart from Allen and colleagues on how to conceptualize the third form of boundary enactment.
Allen and colleagues offer physical enactment at the third form, and although they seem to intend it to include temporal aspects of boundary management, it does not seem to address other characteristics that are also external to the individual such as imposed cross-domain interruptions (e.g., an unexpected visit from a family member at work) or having group members and role partners who span work and family boundaries (Clark 2000). It seems to us that “external” is a word that can apply to such physical, temporal, social structural, and imposed social interactional aspects of boundary management. Thus, we feel that physical enactment is only part of a larger external form of boundary enactment. We define external boundary enactment as entities (e.g., physical objects, time, people), events, and situations outside of the individual that vary in the extent to which they contribute to integrated or segmented work and home boundaries. These may be used by individuals in their boundary enactment or may be imposed on individual to essentially enact integration or segmentation for them. This includes physical overlap, temporal overlap, relational overlap, and imposed interruptions. Physical overlap is defined as objects that represent a domain. They tend to be part of the expected environment of a domain, so they are especially likely to be noticed as domain markers when they crossover from work to home or from home to work. This crossover can be mild, as in the case of a small number of family photos in the workplace, or extreme, as in the case of individuals such as innkeepers who live in the place where they work (Li et al. 2013). Temporal overlap is defined as the extent of overlap in a given day in hours spent in work life and hours spent in home life. This can be measured as the extent to which one distinguishes between work and home life (Li et al. 2013) or in terms of the percent of one’s work hours done at home (Galvin and Schieman 2012). Relational overlap is defined as the extent to which one’s coworkers and one’s family members are the same people. It encompasses what Li and colleagues (2013) refer to as relational border tangibility and what Halbesleben and colleagues (2010) refer to as couple-linked work. The concept of imposed interactions as a component of external enactment merits some explanation. Recall that allowed cross-domain interruptions were mentioned under behavioral enactment because this involves a choice an individual can make. When interruptions are imposed by the environment (so that the individual has no choice in the matter, such as when on-call employees are required to accept phone calls from work when they are not in the workplace), we see them as part of the external environment that has implications for boundary enactment. For the sake of clarity, in the Appendix we present items that seem to measure interruptions of nonwork life separately from items that seem to measure workplace interruptions of work life from nonwork life.

Conclusion

In this review, we have explained the essential features of boundary theory and work-family border theory. We have also discussed the research literature on boundary enactment. Finally, we have made recommendations for future research, with special attention toward resolving inconsistencies in the measurement of boundary enactment. To that end, we have proposed a typology of boundary enactment constructs. We hope that this typology can be used to help boundary scholars interpret the wide variety of scales in the boundary theory literature as well as inform the development of more comprehensive inventories of boundary enactment with subscales that target specific aspects of psychological, behavioral, or external enactment. Such comprehensive measures of enactment may also improve the measurement of other work-family constructs such as spillover by identifying scale items that conceptually are more relevant to boundary enactment than to the ways in which work and family domains tend to
interact with each other. We believe that such efforts could ultimately help work-family scholars and practitioners more effectively distinguish between boundary enactment and work-family outcomes.
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APPENDIX
DIMENSIONS OF BOUNDARY ENACTMENT

Psychological Boundary Enactment

Psychological boundary enactment includes three constructs: work absorption, nonwork absorption, and cognitive work-family blurring. What each of these constructs have in common is that they involve ways that various cognitions about work and home domains serve to mentally integrate or segment work and home. Below are examples of items in the extant literature that seem to measure aspects of these constructs.

Work absorption. The items below were drawn from Clark’s (2002b) home border permeability scale, Carlson and Frone’s measure of psychological work interference with family, Glavin and Schieman’s work-family role blurring scale, and Sonnentag and Fritz’s (2007) detachment from work scale (which, if used as a measure of psychological absorption, would have to be reverse coded).

- I think about work related concerns while I am at home. (Clark 2002b)
- During time after work, I forget about work. (Sonnentag and Fritz 2007)
- When you are at home, how often do you think about work related problems? (Carlson and Frone 2003)
- When you are at home, how often do you think about things you need to accomplish at work? (Carlson and Frone 2003)
- How often do you think about things going on at work when you are not working? (Glavin and Schieman 2012)

Nonwork absorption. The items below were drawn from the aforementioned measures by Clark (2002b) and Carlson and Frone (2003), as well as from a measure of integration/segmentation enactment called the boundary management strategy scale (Kossek et al. 2006), and from the nonwork interrupting work behaviors scale (Kossek et al. 2012).

- I try to not think about my family or friends when at work, so I can focus (Kossek et al. 2006).
- I do not think about my family, friends, or personal interests while working so I can focus. (Kossek et al. 2012)
- I think about family members when I am at work. (Clark 2002b)
- When you are at work, how often do you think about family related problems? (Carlson and Frone 2003)
- When you are at work, how often do you think about things you need to accomplish at home? (Carlson and Frone 2003)

Cognitive work-family blurring. This is defined as the perception of difficulty or uncertainty in distinguishing between the domains or roles tied to work and nonwork life, and is especially relevant in situations such as working at home that can invoke both work and family meanings in the same context (Desrochers et al. 2005). The items below were drawn from the Work-Family Integration-Blurring Scale (Desrochers et al. 2005), from the
Boundary Management Strategy scale (Kossek et al. 2006) mentioned above, and from Hunter and colleagues’ (2019) boundary violation at work and boundary violations at home scales.

- It is often difficult to tell where my work life ends and my family life begins. (Desrochers et al. 2005)
- It is often difficult to tell where your work life ends and your family life begins. (Desrochers and Sargent 2004)
- In my life, there is a clear boundary between my career and my role as a parent. (Desrochers et al. 2005)
- In your life, there is a clear boundary between work and family. (Desrochers and Sargent 2004)
- All in all, do you see yourself as someone who tries to keep work and personal roles separated most of the time, or someone who tried to keep them integrated? (Kossek et al. 2006)
- Today at work I found it mentally effortful to switch from my work role to my family role and back (Hunter et al. 2019)
- Since leaving work today I found it mentally effortful to switch from my work role to my family role and back (Hunter et al. 2019)

Behavioral Boundary Enactment

Behavioral boundary enactment involves cross-role actions and boundary-spanning actions intended to create integrated or segmented boundaries. Cross-role actions consist of work-related actions outside of the workplace and nonwork-related actions at the workplace. Boundary-spanning actions are behaviors used to make micro role transitions, to simultaneously enact work and family roles, or to create, maintain, or modify both work and home boundaries.

Work-related actions outside of the workplace. The items below were drawn from the aforementioned measures by Clark (2002b), Carlson and Frone (2003), Kossek and colleagues (2006), and Kossek and colleagues (2012), as well as from the measure of role referencing by Olson-Buchanan and Boswell (2006) and the interdomain transition scales by Matthews and colleagues (2010).

- I take care of work related business while I am at home (Clark 2002b)
- I stop in the middle of my home activities to address a work concern (Clark 2002b)
- When you work at home, how often do you try to arrange, schedule, or perform job-related activities outside of your normal work hours? (Carlson and Frone 2003)
- I tend to not talk about work issues with my family (Kossek et al., 2006)
- I regularly bring work home (Kossek et al. 2012)
- I usually bring work materials with me when I attend personal or family activities (Kossek et al. 2012)
- I work during my vacations (Kossek et al. 2012)
- I respond to work-related communications (e.g., emails, texts, and phone calls) during my personal time away from work (Kossek et al. 2012)
- I allow work to interrupt me when I spend time with my family or friends (Kossek et al. 2012)
- I talk about work life with my friends and family (Olson-Buchanan and Boswell 2006)
- I do not use communication technologies for work purposes on weekends (Olson-Buchanan and Boswell 2006)
- How often have you answered work related e-mails while at home? (Matthews et al. 2010)

Nonwork-related actions at the workplace. The items below were drawn the same measures as those used for work-related actions outside of the workplace.

- I take care of family/personal business while I am at work (Clark 2002)
- I stop in the middle of my work to address a family/personal concern (Clark 2002)
- When you are at work, how often do you try to arrange, schedule, or perform family-related activities? (Carlson and Frone 2003)
- I only take care of personal needs at work when I am “on break” or during my lunch hour (Kossek et al. 2006)
- I prefer to not talk about my family issues with most people I work with (Kossek et al. 2006)
- It would be rare for me to read non-work related materials at work (Kossek et al. 2006)
- I monitor personal-related communications (e.g., emails, texts, and phone calls) when I am working (Kossek et al. 2012)
- I respond to personal communications (emails, texts, and phone calls) during work (Kossek et al. 2012)
- I talk about my home/personal life at work (Olson-Buchanan and Boswell 2006)
- How often have you stopped what you were doing at work to meet a family responsibility (Matthews et al. 2010)

Boundary spanning actions. The items below were drawn from some of the aforementioned measures by Desrochers and colleagues (2005), Desrochers and Sargent (2004), Glavin and Schieman (2012), Kossek and colleagues (2006), Kossek and colleagues (2012), and Matthews and colleagues (2010), as well as from a measure of transition frequency by Desrochers and colleagues (2005).

- How often do you try to work on job tasks and home tasks at the same time while you are at home? (Glavin and Schieman 2012)
- I tend to integrate my work and family duties when I work at home (Desrochers et al. 2005)
- You tend to integrate your work and family duties (Desrochers and Sargent 2004)
- I tend to integrate work and family roles throughout the work day (Kossek et al. 2006)
- When I work from home, I handle personal or family responsibilities during work (Kossek et al. 2012)
- Throughout the work day, I deal with personal and work issues as they occur (Kossek et al. 2006)
- I tend to handle emails related to my family separate from emails related to my work (Kossek et al. 2006)
- I actively strive to keep my family and work-life separate (Kossek et al. 2006)
External Boundary Enactment

The external dimension of boundary enactment involves anything outside of individuals that plays a part in their enactment of integration or segmentation, including physical, temporal, and relational enactment, as well as the prevalence of imposed interruptions. Physical enactment involves all relevant material aspects of the locations of work and family domains, such as work-related items (e.g., books, equipment), family-related items (e.g., photos, children’s drawings), and the distance between living spaces and work spaces. Temporal enactment involves the extent to work a distinction is made between work time and nonwork time. Relational enactment involves the extent to which social ties with others tend to span work-family boundaries. Imposed interruptions are disruptions from across domains that are seen as unexpected, intrusive, and not to be ignored. Aside from whether or not a person tends to allow such interruptions (an aspect of behavioral enactment), the interruptions themselves come from outside of the person, so should be measured as part of external work and home boundaries.

Physical overlap. The items below were drawn from the aforementioned measures by Clark (2002b) and Kossek and colleagues (2006), as well as Li and colleagues’ (2013) physical border tangibility scale.

- I have family-related items at my workplace (Clark 2002)
- I have work related items at my home (Clark 2002)
- We now want to ask you about how your workspace is set up at home. Do you use this space in your home only for work? (Kossek et al. 2006)
- Do you live on the B&B property? (Li et al. 2013)
- If you live on the premises, what facilities do you share with guests? (Li, Miao, Zhao, and Lehto, 2013)

Temporal overlap. The items below were drawn from Glavin and Schieman (2012) as well as Li and colleagues’ (2013) temporal border tangibility scale.

- Percent of hours worked at home (Galvin and Schieman 2012)
- Do you distinguish work hours from nonwork hours? (Li et al. 2013)
  - If yes, how often do you work during nonwork hours? (Li et al. 2013)
Relational overlap. The items below were drawn from Li and colleagues’ (2013) relational border tangibility scale as well as Halbesleben and colleagues’ (2010) measure of the extent to which couples are work-linked.

- Do you work with your family members in the day-to-day operations of innkeeping? (Li et al. 2013)
- If yes, which of the following family members work with you? (Li et al. 2013)
- Halbesleben and colleagues (2010) asked married participants about the occupation and workplace of their spouse. Response options included:
  - Does not work outside the home.
  - Works in the same occupation as you, in the same company as you.
  - Works in the same occupation as you, in a different company as you.
  - Works in a different occupation as you, but in the same company as you.
  - Works in a different occupation from you, in a different company as you.

Work interruptions of nonwork behaviors. The items below were drawn from the aforementioned scales by Clark (2002b), Glavin and Schieman (2012), and by Hunter and colleagues (2019).

- Today at work, family life has interrupted work more than I desire (Hunter et al. 2019)
- Today at work, family life has violated my work-family boundary more than I desire (Hunter et al. 2019)
- How often do coworkers, supervisors, managers, customers, or clients contact you about work-related matters outside of normal hours? (Glavin and Schieman 2012)
- I hear from people related to my work while I am at home. (Clark 2002)
- I receive work related calls while at home (Clark 2002)

Nonwork interruptions of work behaviors. The items below were drawn from the aforementioned scales by Clark (2002b) and by Hunter and colleagues (2019).

- Since leaving work today, work has interrupted family life more than I desire (Hunter et al. 2019)
- Since leaving work today, work has violated my work-family boundary more than I desire (Hunter et al. 2019)
- I hear from my family while I am at work (Clark 2002)
- My family contacts me while I am at work (Clark 2002)