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Development and Initial Evaluation of an Enhanced Measure of Boundary Flexibility for the Work and Family Domains

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This manuscript reports the development of a measure of work and family domain boundary flexibility. Building on previous research, we propose an expanded definition of boundary flexibility that includes two components—flexibility-ability and flexibility-willingness—and we develop a measure designed to capture this more comprehensive definition of boundary flexibility. *Flexibility-ability* is conceptualized as an individual's perception of personal and situational constraints that affect boundary management, and *flexibility-willingness* is conceptualized as an individual difference variable that captures the motivation to engage in boundary flexing. An additional feature of domain boundaries, permeability, is also examined. Data are presented from two studies. Study 1 ($N = 244$) describes the development of a multiscale measure that extends current conceptual definitions of boundary flexibility. Study 2 ($N = 225$) describes the refinement and evaluation of this measure. Confirmatory factor analysis, reliability evidence, interscale correlations, and correlations with important work-family constructs (e.g., domain centrality, work-family conflict) provide initial construct validity evidence for the measure.

Keywords: Boundary theory, boundary flexibility, work-family conflict, centrality, life satisfaction

Social scientists define boundaries as conceptual lines of demarcation that separate domains and domain-relevant behaviors (Ashforth, 2001; Clark, 2000). Within Boundary theory it is argued that people maintain boundaries that function as "gateways" into role domains. In past research it has been argued that individuals differ in how they manage their work and family domain boundaries (Clark, 2000; Kossek, Lautsch, & Eaton, 2004, 2006). In turn, characteristics of these boundaries affect the degree to which the domains "blur" with one another in terms of flow between domains (Ashforth, Kreiner, & Fugate, 2000), as well as perceptions of conflict arising between participation in the domains (Clark, 2000; Kossek et al., 2006).

Because domain boundaries have implications for the perception of interrole conflict it is important that we begin applying our understanding of the concept of domain boundaries to research on the interface between work and family (Kossek et al., 2004, 2006). In the current research we develop an expanded definition of boundary flexibility, and report on the development and assessment of a new measure intended to tap into this expanded definition.

Boundary Theory: Theoretical Foundations

Scholars who have applied Boundary theory to work-family research have argued that people develop distinct boundaries around work and family domains, respectively (Ashforth et al., 2000; Clark, 2000). This counters the traditional conceptualization of a single boundary that separates work and family (cf., Leiter & Durup, 1996). The rationale for suggesting that work and family have distinct boundaries is that the two domains are grounded in their own cultures, each with an independent purpose driving behaviors within those domains (Ashforth et al., 2000; Clark, 2000). Voydanoff (2005) has noted that this understanding is similar to that of Ecological systems theory, in which work and family function as two microsystems (i.e., immediate environments) that together form a mesosystem (i.e., a larger system comprised of interconnected immediate environments). Individuals engage in a variety of roles with each domain and maintain an array of interpersonal relationships. When the two domains come in contact they have the opportunity to influence one another, as

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a function of the nature of boundaries surrounding the domains.

Ashforth et al. (2000) have argued that individuals create and maintain boundaries around the work and family domains to order and simplify the environments in which they operate. They further suggest that a natural consequence of domain boundaries is a segmentation-integration continuum that characterizes the different kinds of relationships individuals maintain between work and family, and that locations along the continuum are associated with different costs and benefits. The segmentation-integration continuum is defined in terms of the amount/ease of "flow" between domains; functionally, domain boundaries serve to either encourage or discourage "flow" (movement/transitions) between domains.

Segmentation exists when the flow between domains is minimized, resulting in reduced domain blurring (Ashforth et al., 2000). For example, with highly segmented domains an individual at work is unlikely to be interrupted by phone calls from family members. The potential cost of segmentation is that transitions between domains may be hindered; for example, when pressing demands arise in a family domain, it may be difficult to disengage from work tasks and transition to the family domain (Ashforth et al., 2000). In contrast, when work and family are highly *integrated*, flow between domains is maximized, facilitating interdomain transitions. However, this results in the blurring of the two domains, introducing a different kind of "cost" for the individual (Ashforth et al., 2000). For example, with highly integrated domains an individual may bring work home to complete, which may result in interdomain conflict if it interferes with family responsibilities (Voydanoff, 2005).

Fully segmented and fully integrated domains represent opposite ends of the segmentation-integration continuum. Because work and family boundaries can vary in a number of ways (Ashforth et al., 2000; Bulger, Matthews, & Hoffman, 2007), there are several possible configurations between the two ends of the continuum. For example, an individual may allow work to "flow" into the family domain (e.g., takes work home at the end of the day), but not allow family to enter the work domain (e.g., will not take family related calls at work). Alternatively, an individual may segment the family domain from work, or allow some flow between both domains. This highlights the idea that the two boundaries are conceptually distinct.

Nonetheless, theoretical conceptualizations of *what* domain boundaries are and *how* to index them are still evolving (Kossek et al., 2004). Apart from the segmentation-integration continuum that is produced by different boundary management strategies (Kossek et al., 2006), it has been suggested that boundaries have two related but distinct characteristics, *flexibility* and *permeability*, which permit or discourage integration of domains. Flexibility is the degree to which an individual contracts or expands a domain boundary, be it physically or temporally, in response to demands from another domain (Clark, 2002; Hall & Richter, 1988). Permeability is the degree to which an individual allows elements from one domain to enter the other domain (Ashforth, 2000; Clark, 2000; Hall & Richter, 1988). Elements can either be psychological (e.g., worrying about a sick child while at work) or behavioral (e.g., having a work colleague visit at home) in nature.

Although flexibility and permeability represent different facets of a boundary, the two characteristics are conceptually and empirically related (Ashforth et al., 2000; Bulger et al., 2007; Clark, 2000). However, although a measure of boundary permeability has been developed (Clark, 2002), the related concept of boundary flexibility has received less theoretical and empirical attention. The research presented here is intended to further develop our understanding of work and family boundary management by focusing on boundary flexibility.

Enhancing Our Understanding of Domain Boundaries

In a sense, boundary flexibility is the degree to which an individual can be "drawn" out of one domain to meet the demands of the opposing domain (either behaviorally or cognitively). Boundary flexibility has traditionally been conceptualized and operationalized in terms of an individual's belief that he or she is *able* to change when and where domain activities take place (Ashforth et al., 2000; Clark, 2000; Clark, 2001; Kossek et al., 2004), what we will refer to as *flexibility-ability*. Flexibility-ability represents a cognitive appraisal made by an individual of situational characteristics of a domain that they perceive as influencing their ability to leave one domain for another (Edwards & Rothbard, 1999; Lazarus & Folkman, 1984). Thus, flexibility-ability is conceptualized as the degree to which individuals perceive they are able to move easily between domains.

Flexibility-ability is less an assessment of personal capabilities than it is a personal evaluation of the

extent to which ability to change the timing and location of domain relevant behaviors is outside one's direct control. When the ability to change when and where domain related activities take place is perceived to be controlled by a third party or strongly influenced by external factors (Kossek et al., 2006), flexibility-ability will be a personal assessment of the extent to which movements are "permitted." Thus, perceptions of the ability to move between domains will be influenced by such issues as organizational policies and norms that constrain (or facilitate) a worker's ability to flex work activities to address family and personal responsibilities and beliefs about manager willingness to support domain movement (Kossek et al., 2004; Perlow, 1998; Schriber & Gutek, 1987).

Flexibility-ability contributes to interdomain integration by increasing an individual's opportunities to be drawn out of the domain. When flexibility-ability is high, the individual perceives either there are few external factors (e.g., child care responsibilities) preventing them from leaving the domain, or that there are factors that facilitate their ability to leave the domain (e.g., supportive supervisor). For workers who prefer to integrate work and family, low perceived flexibility-ability may lead to difficulties in managing the work-family interface because it interferes with flow between the two domains.

However, conceptualizing flexibility only in terms of *ability* implies that the tendency to segment or integrate domains has little to do with individual preferences and motivation. We believe that our conceptual understanding of flexibility can be improved by incorporating the idea that people differ both in their perceived *ability* to change when and where domain activities take place, and also in the degree to which they are *willing* to make such changes.

Nippert-Eng (1996) abstractly introduced the notion of willingness abstractly by suggesting that although perceived structural constraints may exist (resulting in low flexibility-ability), individuals take advantage of possible avenues of discretion when possible (what we will call *flexibility-willingness*) to integrate or segment domains as they desire. Likewise, Kreiner (2006) found that individuals systematically differ in their preference to integrate work and family. Thus, it does not necessarily follow that a person is willing to change domains simply because he or she believes it is possible. Conversely, an individual may perceive constraints on the ability to transition, but he or she may demonstrate a high willingness to do so if the need arose.

We conceptualize flexibility-willingness as a motivationally oriented individual difference variable that contributes to actual levels of domain segmentation-integration. For example, organizations may have formal or informal work-family policies such as telecommuting available for employees to use; this should contribute to perceptions of high work flexibility-ability (Kossek et al., 2006). However, for employees with low work flexibility-willingness, these telecommuting opportunities may not be fully utilized.

A similar distinction was made by Edwards and Rothbard (1999), who suggested that segmentation supplies are objective resources that allow an individual to maintain a desired level of segmentation, and that segmentation values are what an individual feels is an acceptable level of segmentation supplies (Edwards & Rothbard, 1999). Conceptually, segmentation supplies relate fairly consistently with flexibility-ability, although we would argue that flexibility-ability is more directly concerned with the perception of opportunities and constraints on one's ability to move between domains, rather than specific objective resources that are available in a situation. Segmentation value, and likewise segmentation preference (Kreiner, 2006), are related to the concept of flexibility-willingness, although the concepts are not redundant. Segmentation value represents acceptable/preferred levels of segmentation that should influence, but not subsume, the motivational component of boundary flexibility. Just as the valence component of expectancy theories of motivation contributes to individual willingness to exert effort, we conceptualize segmentation values and preferences as antecedents of willingness to engage in boundary flexing activities, rather than being interchangeable with flexibility-willingness.

Several measures of boundary characteristics currently exist. Clark (2001, 2002) has developed measures of boundary flexibility based on a definition that is in line with our conceptualization of flexibility-ability (Clark, 2001, 2002). Clark (2002) has also developed a measure of domain permeability, which represents a feature of boundaries that is conceptually distinct from boundary flexibility. However, Clark's boundary flexibility measures do not capture the interaction between work and family at the item level. In addition, the items in these measures are domain explicit and fail to reference the opposing domain. For example, "I am able to arrive and depart from work when I want" is a general statement about control over work schedules (Clark, 2001; p. 354) and does not refer to family needs as the reason for

altering arrival/departure times. Furthermore, Clark's (2001, 2002) measures do not assess the motivational component of boundary flexibility.

In addition to the measurement work by Clark, Kreiner (2006) has developed a measure of segmentation preferences. Kreiner's measure is related to what we have classified as flexibility-willingness. However, the measure primarily assesses the desire to keep the family domain segmented from the work domain; it does not assess an individual's willingness to keep the work domain segmented from the family domain. Although Kreiner's measure serves as a first step toward assessing flexibility-willingness, it does not fully capture the complexity of flexibility-willingness that we have proposed.

Finally, Desrochers, Hilton, and Larwood (2005) have published a measure of work-family integration-blurring that assesses perceptions of whether the work and family domains are independent of one another. Their measure has considerable utility in assessing outcomes of boundary features. However, Desrochers et al.'s (2005) measure does not address the need to first identify the boundary characteristics that produce integration-blurring.

In the following sections we present two studies that report on the development of a new measure of boundary flexibility that incorporates our expanded definition of flexibility. In Study 1 we report on the development of a new multidimensional measure for assessing work and family boundary flexibility. In Study 2 we report on the refinement and confirmation of the structure of our proposed measure; we also incorporate boundary permeability as a related but distinct feature of work and family boundaries.

Study 1: Initial Scale Development

The conceptual definitions outlined above were used to develop items for an expanded measure of boundary flexibility. A large pool of items was developed to represent the four flexibility content domains (work flexibility-ability, work flexibility-willingness, family flexibility-ability, family flexibility-willingness). Some items were also adapted from existing measures (Clark, 2001, 2002; Kreiner, 2006). Items were reviewed for clarity and content by three graduate student subject matter experts familiar with the concept of domain boundaries. The resulting collection of 36 items was administered were administered to a sample of working adults and exploratory factor analysis was used to select the best functioning items, and to evaluate the resulting scales.

Method

Participants and procedure. Participants were recruited using an online recruitment panel (StudyResponse.org) managed as part of an Internal Review Board approved university-based research study. An e-mail recruitment message was sent to 1,112 panel members (all working adults). A follow-up reminder was sent one week after the initial e-mail invitation. The Web-based survey took approximately 15–20 min to complete. In return for their participation, respondents were entered into a drawing for monetary prizes.

There were 273 surveys completed (response rate = 25%); our response rate is consistent with other studies using this recruitment procedure (e.g., Piccolo & Colquitt, 2006). Seven surveys were identified as duplicates based on Participant IDs (IDs are generated by the panel) and another 22 were removed for failing to complete at least 75% of the survey; this resulted in a final sample of 244 participants. Of the 244 respondents, 56% were female, 60% were married or living with a partner, and 35% had children under the age of 18 living with them. The mean age of participants was 37.4 years (SD = 10.9), and average job tenure was 6.1 year (SD = 6.2), with an average work week of 43.6 hr (SD = 8.1).

Measures

Domain flexibility. Thirty-six flexibility items were created; 21 items were developed for this study, another 15 items were modified from existing scales (e.g., Clark, 2001, 2002; Kreiner, 2006): 10 Work Flexibility-ability (WFA) items, 9 Work Flexibility-willingness (WFW) items, 9 Family Flexibility-ability (FFA) items, and 8 Family Flexibility-willingness (FFW) items. A mixture of positively and negatively worded items was included. Participants were informed that the term "personal life responsibilities" includes family commitments, plans made with family or friends, or obligations relating to family and friends. Participants responded using a 7-point Likert response scale (1 = strongly disagree, 7 = strongly agree) (items from the final revised scales can be found in Appendixes A and B).

Demographic items. Self-reports of the following demographic variables were also collected: age, gender, job tenure (years), hours worked, number of children, and occupation.

Results

Principal axis factor analysis with direct oblimin rotation ($\delta = 0$) was conducted to examine the initial structure of the proposed domain flexibility items. Oblimin rotation was selected because, although we expected each of the boundary components to be separate, we anticipate that they are related to a higher order work domain (or family domain) construct; thus, some correlation between factors was expected. An initial eight factor solution that explained 49.4% of the variance was extracted, using the 36 proposed items. However, review of the scree plot suggested a more parsimonious four factor solution was possible. Based on this initial analysis, 20 of the 36 proposed items were eliminated from further consideration for one or more of three reasons: (1) factor loadings less than .40, (2) split loadings (loadings greater than .30 on two or more factors), or (3) poor conceptual fit with other items loading on the factor.

To maximize the use of available data, a second exploratory analysis was then conducted. The remaining 16 items loaded on four distinct factors that were conceptually consistent with the proposed dimensionality of domain flexibility. The four factor solution (all eigenvalues >1) explained 47.1% of the total variance; review of the scree plot also supported a four factor solution. Four items loaded on each factor; factor loadings ranged from .42 to .81. Three items adapted from existing measures were retained in the final EFA solution, the remaining 13 items were specifically written for this study. Factor loadings, explained variances, and reliabilities for each factor in the four factor solution are reported in Table 1.

Unit-weighted scales based on the four rotated factors were formed and internal consistency reliability estimates were calculated for each scale. Coefficient alphas for FFA, FFW, WFA, and WFW were, respectively, .72, .75, .84, and .68. Following the standards suggested by Robinson, Shaver, and Wrightsman (1991) WFA demonstrated exemplary reliability (.80 or greater), FFW and FFA demonstrated extensive reliability (between .70 and .79), and WFW demonstrated moderate reliability (between .60 and .69).

Discussion

Study 1 was designed to develop a new measure to assess work and family domain flexibility, respec-

Table 1
Exploratory Factor Analysis Loadings for Flexibility Measures

	Factor			
	1	2	3	4
Family Flexibility-ability 1	**.71**	−.03	−.07	.08
Family Flexibility-ability 2	**.68**	.07	.07	−.05
Family Flexibility-ability 3	**.66**	.11	.12	.04
Family Flexibility-ability 4	**.42**	−.03	−.12	−.10
Family Flexibility-willingness 1	−.13	**.73**	−.08	−.11
Family Flexibility-willingness 2	.14	**.71**	.08	−.01
Family Flexibility-willingness 3	.04	**.58**	−.18	−.07
Family Flexibility-willingness 4	.16	**.46**	.09	.14
Work Flexibility-ability 1	.06	−.13	**−.81**	.05
Work Flexibility-ability 2	.12	.05	**−.76**	−.07
Work Flexibility-ability 3	−.15	.44	**−.75**	.04
Work Flexibility-ability 4	.02	.41	**−.73**	.04
Work Flexibility-willingness 1	.02	−0.12	−.09	**.71**
Work Flexibility-willingness 2	.05	−.15	.06	**.70**
Work Flexibility-willingness 3	−.23	.15	.06	**.53**
Work Flexibility-willingness 4	.13	.01	−.13	**.42**
Eigenvalues	3.04	2.62	3.05	1.72
Explained Variance	23.8%	3.8%	6.2%	13.4%
Cronbach's alpha reliability	.72	.75	.84	.68

Note. Extraction Method: Principal Axis Factoring. Rotation Method: Oblimin (delta = 0). Bolded factor loadings indicate those items load highest on that dimension. The factors have been re-ordered for clarity sake, this is why the percent variance explained do not systematically decrease.

tively. Four distinct scales were developed. Two scales pertain to work domain flexibility (willingness and ability); the other two scales pertain to family domain flexibility (willingness and ability). The reliability estimates for three of the four scales were found to be acceptable. We recognize that conducting a second EFA on the same data after removing items based on the initial EFA is generally not recommended, because this approach capitalizes on chance. However, given the preplanned secondary data collection as part of Study 2, we feel that this approach was merited as a first step in our scale development.

Overall, the items retained in each of the four factors adequately represent the conceptual definitions of each factor. However, we felt that developing additional items for three of the proposed scales (FFA, FFW, and WWF) could enhance our representation of the conceptual definition for each of these factors. As such, additional items for these factors were developed as part of Study 2.

Study 2: Scale Refinement and Evaluation

Study 2 was designed to refine the boundary flexibility measure developed in Study 1 and confirm the structure of the proposed measure with an independent sample of working adults. The flexibility-ability and flexibility-willingness scales developed in Study 1 were supplemented with additional items. We also included measures of boundary permeability (Clark, 2002) to assess evidence that our revised boundary flexibility scales are distinct from boundary permeability. Confirmatory factor analysis was used to test the fit of our covariance matrix to the proposed measurement model, which included flexibility-ability, flexibility-willingness, and permeability as distinct, but related, characteristics of work and family domain boundaries. Furthermore, consistent with previous work that has theorized a positive relationship between the flexibility and permeability features of boundaries (Ashforth et al., 2000; Clark, 2000), we predict that the flexibility of each boundary is positively associated with its permeability.

> *Hypothesis 1:* Flexibility-ability and flexibility-willingness are positively related to permeability, for work and family domains, respectively.

Data were also collected to examine several aspects of the nomological network surrounding the boundary flexibility and permeability measures. First, drawing on gender role theory it can be argued that gender should have consequences for both ability and motivation components of boundary flexibility. Based on arguments rooted in the effects of traditional gender roles (e.g., Simon, 1995), we hypothesize that women perceive greater constraints on their ability to leave the family domain for work, and are less willing than men to leave family for work, but are more willing than men to leave work for family.

> *Hypothesis 2a:* Women report less family flexibility-ability compared to men.

> *Hypothesis 2b:* Women report less family flexibility-willingness compared to men.

> *Hypothesis 2c:* Women report greater work flexibility-willingness compared to men.

Second, we anticipate that children create an obligation to the family domain that constrains parents' behaviors. Likewise work schedules create an obligation to the work domain that constrains workers' behaviors. As such, number of children at home and reported work hours serve as proxies for domain obligations that should negatively influence perceived opportunities to flex the family and work boundaries, respectively.

> *Hypothesis 3:* Number of children is negatively correlated with family flexibility-ability.

> *Hypothesis 4:* Work hours is negatively correlated with work flexibility-ability.

It has also been argued that domain centrality is a relevant construct to consider in the examination of domain boundaries (e.g., Edwards & Rothbard, 1999; Voydanoff, 2005). Domain centrality is defined as the degree to which an individual defines his or her self-concept in reference to that specific domain (Stryker & Burke, 2000). The more central a domain is to one's self-concept, the more motivated an individual should be to maintain boundaries that protect the domain. This is the basis for the following hypotheses concerned with the relationship between domain centrality and the willingness component of boundary flexibility.

> *Hypothesis 5a:* Family centrality is negatively correlated with family flexibility-willingness, and positively correlated with work flexibility-willingness.

> *Hypothesis 5b:* Work centrality is negatively correlated with work flexibility-willingness, and

positively correlated with family flexibility-willingness.

A premise of Boundary theory is that the ways people manage their work and family boundaries have costs and benefits (e.g., Ashforth et al., 2000). One frequently studied "cost" of managing work and family obligations is stress; as such, we also examined how our measures of boundary flexibility are related to work-family conflict and end-of-workday strain. Based on Conservation of Resources theory, Hobfoll and Shirom (2000) have argued that individuals who have more resources to draw on are less likely to experience stress. We suggest that the ability component of boundary flexibility functions as a resource. When individuals perceive high flexibility-ability, they should feel that they have more resources to draw on to address stressors that arise from the work-family interface. Consequently, strain outcomes like work-family conflict and end-of-workday strain are less likely to result when boundary flexibility is high (Lazarus & Folkman, 1984). This argument is similar to discussions of segmentation supplies provided by Edwards and Rothbard (1999). Thus, we predict that boundary flexibility-ability is negatively related to work-family conflict (work-to-family and family to-work) and end-of-workday strain.

Hypothesis 6a: Family flexibility-ability is negatively correlated with work-family conflict and end-of-workday strain.

Hypothesis 6b: Work flexibility-ability is negatively correlated with work-family conflict and end-of-workday strain.

Several other demographic variables (e.g., marital status, frequency of overtime) and a measure of life satisfaction were also included to gain a better understanding of the nomological network surrounding the proposed flexibility measures. However, no formal hypotheses were tested in relation to these constructs.

Methods

Participants and procedure. A peer nomination procedure, similar to that employed by Martins, Eddleston, and Veiga (2002), was utilized to recruit participants for Study 2. An e-mail invitation was sent to primarily nonacademic colleagues of the Principal Investigators. The study was described and individuals who met the criteria for participation (at least 18 years of age and working at least 30 hr a week) were asked to follow the Web link supplied in the e-mail and complete the Web-based survey. All recipients of the e-mail were also requested to forward the e-mail invitation to individuals who met the study criteria and who might be interested in participating. The survey was formatted similarly to the Study 1 survey, and took ~20 min to complete.

There were 260 individuals participated in the survey. Forty respondents were removed because they reported working less than 30 hr a week; another three participants were removed for systematically missing data. This resulted in a final sample of 217, of which 61% were female, 64% were married or living with a partner, and 29% had children under the age of 18 living with them. The mean age of participants was 36.0 years (SD = 10.7), average job tenure was 6.3 years (SD = 7.5), and respondents reported an average work week of 45.7 hr (SD = 9.6). Almost a third of the sample reported working in professional and/or related occupations, another 23% worked in management, business, and financial operations. Because of the nature of the recruitment strategy it is not possible to calculate response rates.

Measures

Unless otherwise indicated, participants responded using a 7-point Likert response scale (1 = strongly disagree, 7 = strongly agree).

Domain flexibility. In addition to the 16 items developed and retained from Study 1, seven supplemental items were written and included for testing. Items retained from Study 1 and the new items developed and retained as part of Study 2 are reported in Appendixes A and B. Four items were included to assess WFA; seven items were included to assess WFW; six items were included to assess FFA; and six items were included to assess FFW. Five negatively worded items and 18 positively worded items were included in the pool. Participants were informed that the term "personal life responsibilities" should be interpreted as referring to family commitments, plans made with family or friends, or obligations relating to family and friends.

Domain permeability. Domain permeability was assessed with scales developed by Clark (2002). Six items were used to assess WP; another six items were used to assess FP. Because of technical difficulty one of the family permeability items was not available for analyses (i.e., a word was accidentally omitted in the survey that left the item ambiguous to

respondents). Items are reported in Appendixes A and B.

Domain centrality. Subscales from the Life Role Salience Scales were used to assess work and family domain centrality (Amatea, Cross, Clark, & Bobby, 1986). A modified 4-item version of the Occupational Role Value Scale ($\alpha = .73$) was used to measure work domain centrality; we removed the negatively worded item from the original 5-item measure because it failed to load consistently in a series of initial exploratory factor analyses. A sample item is "Having work/a career that is interesting and exciting to me is my most important life goal." To measure family domain centrality, the 5-item Marital Role Value Scale (Amatea et al., 1986) was modified to ask participants about their family rather than their marriage ($\alpha = .87$). A sample item is "My life would seem empty if I never had a family."

Work-family conflict. Eight items were drawn from MacDermid et al. (2000) to assess work-family conflict. Four items were used to measure work-to-family conflict ($\alpha = .79$); four items were used to measure family to-work conflict ($\alpha = .74$). A sample work-to-family conflict item is, "I came home from work too tired to do some of the things I wanted to do." A sample family to-work conflict item is, "I was too tired to be effective at work because of things I had to do at home." Participants were given the prompt "How often have you experienced each of the following during the past three months?" and were asked to rate each statement based on a 4-point frequency scale (1 = rarely, 4 = most of the time).

End-of-workday strain. End-of-workday strain ($\alpha = .78$) was measured using a 3-item measure (Barnes-Farrell & Piotrowski, 1991). A sample item is, "How physically tired do you feel at the end of a normal working day?" Participants answered on a 5-point scale (1 = not at all, 5 = extremely).

Life satisfaction. Life satisfaction ($\alpha = .87$) was measured with a 5-item scale (Diener, Emmons, & Larsen, 1985). A sample item is, "In most ways, my life is close to ideal."

Demographics. Self-reports of the following demographic variables were also collected: age, gender, job tenure, hours worked, number of children, and occupation.

Results

Responses to the domain boundary scales (WFA, WFW, WP, FFA, FFW, and FP) were analyzed using structural equation modeling software package AMOS 7 (Arbuckle, 2006). A four-stage, marker variable, confirmatory factor analysis (CFA) strategy was used (Kline, 1998; Noar, 2003). In Stage I, a null model was tested that served as a baseline for comparison with other models. In Stage II the fit of a single overall boundary factor model was tested. A good fitting model would suggest that domain boundaries are a unidimensional construct. In Stage III an uncorrelated factors model was tested to examine the orthogonality of the latent scales. Support for this model would indicate that separate constructs are being assessed. In Stage IV a correlated factors model was tested to examine whether people discriminate between latent variables, but allowing for the possibility that the latent variables are related to one another.

Four measures of model fit were calculated: χ^2, comparative fit index (CFI), root mean square error of approximation (RMSEA), and standard root mean residual (SRMR). However, such issues as model complexity, the theoretical underpinnings of the model, and the interpretability of estimates must be considered when evaluating model "fit" (Hu & Bentler, 1999; Marsh, Hau, & Wen, 2004). To this end, several key issues were considered when evaluating model fit. First, given the overall complexity of the model and the potential for systematic relationships to exist that have not been proposed, modification indices were examined to ensure the model did not systematically deviate from the data. Second, the following cut-off values for the goodness-of-fit indices were considered as acceptable: a CFI of.90 (Medsker, Williams, & Holahan, 1994), a RMSEA value of .06, and a SRMR value of .08 (Hu & Bentler, 1999). Finally, the interpretability of model parameters was assessed (i.e., no negative variance estimates).

Results of the CFA analyses, in addition to the fit statistics for a Respecified Correlated Factors model, are reported in Table 2. As expected, the Null model had the worst fit. Fit statistics improved in each successive stage of testing; χ^2-difference tests support the argument that model fit significantly improved in each stage of testing.[1] The Stage IV Correlated Factors model demonstrated the best overall fit. However, it still did not meet an acceptable level of fit.

To explore whether a better fitting Correlated Factors model could be achieved several respecification

[1] Because there are the same number of *df* between the One Factor Model and the Uncorrelated Six Factor Model, a χ^2-difference test could not be calculated.

Table 2
Confirmatory Factor Analysis of the Proposed Boundary Measures

Models	χ^2	*df*	Fit indexes			χ^2-difference test	
			CFI	RMSEA	SRMR	$\Delta\chi^2$	*df*
Null Model	3666.25	561	—	—	—	—	—
One Factor Model	2669.96**	527	.40	.14	.16	996.29**	34
Uncorrelated Six Factor Model	1374.91**	527	.73	.09	.16	1295.05	0
Correlated Six Factor Model	1108.67**	512	.81	.07	.09	266.24**	15
Respecified Correlated Six Factor Model	469.98**	281	.92	.06	.07	—	—

Note. CFI = comparative fit index; RMSEA = root mean square error of approximation; SRMR = standardized root mean residual.
** $p < .01$.

strategies were employed to increase model fit (Kline, 1998); given the sheer number of possible respecifications, all modifications were conceptually grounded. First, indicators with low standardized loadings (.35 or less) and/or high standardized residual covariances (>1.98) were identified for possible removal. After reviewing the wording of these items for conceptual fit with other indicators, eight items were removed (two WFW items, two WP items, one FFA item, two FFW items, and one FP item).

Review of the standardized residual covariances and modification indices suggested that freeing the correlations between measurement errors associated with individual items would further increase model fit. Because a conceptual argument based on the wording of the items could be made for their shared

Table 3
Descriptive Statistics for the Domain Boundary Measures and Nomological Network Bivariate Correlations (ns = 215–217)

Boundary characteristics	Mean	*SD*	1	2	3	4	5	6	7	8	9
1. Family Flexibility-ability	4.95	1.12	(.71)								
2. Family Flexibility-willingness	4.15	1.33	.43**	(.79)							
3. Family Permeability	4.94	1.43	.24**	.50**	(.86)						
4. Work Flexibility-ability	5.32	1.33	.32**	.22**	.13	(.86)					
5. Work Flexibility-willingness	5.75	1.00	.02	−.07	.03	.45**	(.71)				
6. Work Permeability	5.69	1.12	−.12	.00	.14*	.36**	.42**	(.80)			
Demographic information											
7. Gender[a]	1.61	0.49	−.20**	−.23**	−.11	−.06	.19**	.14*	—		
8. Age	35.97	10.67	.09	.11	.12	.01	.04	.19**	−.12	—	
9. Marital status[b]	1.36	0.48	.12	.10	−.01	−.06	−.14*	−.33**	−.04	−.28**	—
10. Children 18 and under[c]	1.29	0.46	−.21**	.10	.14*	−.07	.03	.18**	.01	.14*	−.31**
11. Frequency of overtime	2.74	0.92	.15*	.18**	.25**	−.06	.01	−.15*	−.06	−.07	.21**
12. Hours worked	45.66	9.56	.10	.15*	.26**	−.15*	−.03	−.15*	−.17*	−.08	.06
Work-family constructs											
13. Family centrality	5.90	1.06	−.22**	−.13	−.05	.03	.23**	.36**	.15*	.04	−.22**
14. Work centrality	4.52	1.11	.35**	.36**	.29**	.10	−.14*	−.20**	−.14*	−.21**	.12
15. Family-to-work conflict	1.31	0.42	−.20**	.02	.15*	.05	−.04	−.01	−.02	−.14*	.11
16. Work-to-family conflict	1.89	0.66	−.22**	−.07	.08	−.26**	−.10	−.15*	.00	−.17*	.11
17. End-of-workday strain	2.97	0.85	−.24**	−.02	.08	−.18**	−.04	−.09	.10	−.17*	.01
18. Life satisfaction	4.92	1.22	.15*	.02	.00	.07	.07	.12	.05	.14*	−.27**

Note. Internal consistency estimates reported in parentheses.
[a] 1 = Male, 2 = Female. [b] 1 = Married, 2 = Single. [c] 1 = No children, 2 = Yes children.
* $p < .05$. ** $p < .01$.

error, measurement errors for the following three pairs of items were set free to correlate: WP3-WFW4, WFA2-FFA1, and FFA3-FFA4. A conceptual argument could not be made for shared measurement error of any additional pairs of items.

Fit of the Respecified Correlated Factors model was adequate, $\chi^2(281) = 469.98$, $p < .05$, CFI = .92, RMSEA = .06 (90% CI = .05 to .07), SRMR = .07. All remaining indicators had significant and substantial loadings on their hypothesized latent factors (for FFA indicator paths ranged from .47 to .66, for FFW the range was .59 to .78; for FP the range was .66 to .90; for WFA the range was .73 to .83; for WFW the range was .42 to .68; and for WP the range was .46 to .94). Scale means, standard deviations, reliabilities, and correlations between constructs based on the Respecified Correlated Factors model are reported in Table 3. The revised WFA, WP, and FP measures demonstrated exemplary reliabilities (.80 or greater); the WFW, FFA, and FFW measures demonstrated extensive reliability (.70 to .79; Robinson et al., 1991).

Next, correlations between the six measures were examined for evidence that: (1) within-domain measures of flexibility-ability are distinguishable from flexibility-willingness; (2) within-domain measures of flexibility are distinguishable from permeability; (3) measures of boundary characteristics clearly distinguish between work boundaries and family boundaries. As reported in Table 2, correlations between within-domain flexibility constructs were strong (r for FFA and FFW = .43, r for WFA and WFW = .45), but do not imply issues of multicollinearity. In support of Hypothesis 1, FFA and FFW were positively correlated with FP (r = .24 and .50, respectively; see Table 3); likewise, WFA and WFW correlated positively with WP (r = .36 and .42, respectively). Consistent with the argument that work and family boundaries are distinct entities, the majority of interdomain correlations were near zero, with the notable exception of WFA, which was positively correlated with both FFA (r = .32) and FFW (r = .22). It is also interesting to note that the two ability measures (FFA-WFA r = .32, $p < .01$) were more strongly correlated than the two willingness measures (FFW-WFW $r = -.07$, $p > .05$). We return to this issue in our discussion.

10	11	12	13	14	15	16	17	18
—								
−.14*	—							
−.04	.50**	—						
.19**	−.12	−.06	(.87)					
−.09	.24**	.20**	−.29**	(.73)				
−.04	.08	−.01	.05	.01	(.74)			
.03	.30**	.30**	.05	.08	.40**	(.79)		
.06	.23**	.16*	.05	.13	.38**	.57**	(.78)	
.05	−.11	−.08	.18**	.09	−.28**	−.23**	−.26**	(.87)

Construct validity: nomological network. Correlations between the boundary measures, demographic characteristics, and other variables relevant to tests of Hypotheses 2–6 are reported in Table 3. Independent *t* tests of gender differences support Hypotheses 2a–c. Women reported less FFW [$t(214) = 3.52$, $p < .01$, Cohen's $d = 0.48$; $M = 3.90$, $SD = 1.32$] and more WFW [$t(214) = -2.88$, $p < .01$, Cohen's $d = -0.39$; M = 5.90, $SD = 0.87$] compared to men ($M_{FFW} = 4.54$, $SD_{FFW} = 1.25$; $M_{WFW} = 5.51$, $SD_{WFW} = 1.14$). Women also reported less FFA [$t(214) = 2.98$, $p < .01$, Cohen's $d = 0.41$; $M = 4.76$, $SD = 1.18$] compared to men ($M = 5.22$, $SD = 0.95$). No significant gender differences were observed for WFA [$t(214) = 0.89$, $p > .05$, Cohen's $d = 0.12$].

Consistent with Hypotheses 3 and 4, variables that should affect perceived situational constraints were related to flexibility-ability. Individuals working longer hours reported less WFA ($r = -.15$, $p < .05$), and individuals with children reported less FFA ($r = -.21$, $p < .01$).

With one exception, predicted relationships between domain centrality and motivation to flex domain boundaries were also supported. In partial support of Hypothesis 5a, family centrality was positively correlated with WFW ($r = .23$, $p < .01$), but not significantly related to FFW ($r = -.13$, $p > .05$). Consistent with Hypothesis 5b, work centrality was positively correlated with FFW ($r = .36$, $p < .01$), and negatively correlated with WFW ($r = -.14$, $p < .05$). Thus, the extent to which a domain is central to one's self-identity was generally associated with less willingness to leave that domain and more willingness to transition into that domain if needed.

Hypothesis 6 was also generally supported. Perceived ability to flex the family boundary (FFA) was negatively correlated with work-to-family conflict and end-of-workday strain ($r = -.26, -.18$, $p < .01$, respectively); it was not correlated with family to-work conflict ($r = .05$, $p > .05$). Perceived ability to flex the work boundary (WFA) was negatively correlated with family to-work conflict, work-to-family conflict, and end-of-workday strain ($r = -.20, -.22, -.24$, $p < .01$, respectively).

In addition to support for Hypothesis 2–6, inspection of Table 3 shows patterns of correlations between boundary characteristics and the demographic/work-family characteristics included in this study that (1) are noticeably different for the family and work boundaries; and (2) are noticeably different for the three boundary characteristics measured in this study. All of the demographic and work-family variables included in the study were significantly related to at least one boundary characteristics; one variable (work centrality) was related to 5 of the 6 boundary characteristics. When we look at Family boundary characteristics, family flexibility-ability was associated with 9 of the 12 variables, while family flexibility-willingness and family permeability were associated with 4 and 5 variables, respectively. In contrast, when we look at the pattern of relationships for Work boundary characteristics, work flexibility-ability was associated with only 3 of the 12 variables, while work flexibility-willingness and work permeability were associated with 4 and 9 variables, respectively.

Post hoc analyses. To further explore construct validity evidence for our measure, we conducted additional post hoc regression analyses. Conflict between the work and family domains is one plausible immediate outcome of boundary management activities. Based on that rationale, we conducted a pair of hierarchical multiple regression analyses that included the entire set of boundary measures as predictors of work-to-family and family to-work conflict, respectively.

Work-to-family and family to-work conflict were regressed on the four boundary flexibility measures and the two permeability measures, after controlling for gender and presence of children under the age of 18. Results of these analyses are summarized in Table 4. Collectively, boundary characteristics accounted for 13% of the variance in WFC and 13% of the variance in FWC. Standardized regression weights for individual facets of work and family boundaries in the two regression analyses generally replicate the pattern of bivariate correlations reported in Table 3. One area of departure was the finding that WFA was positively related to FWC in the regression model, although it was not related to FWC at the bivariate level. We will return to this issue in our discussion.

Discussion

In Study 2, additional items were tested for the FFA, FFW, and WFW scales developed in Study 1. All four scales demonstrated acceptable internal reliabilities and our structural model provides additional evidence that family and work boundaries are distinct. Furthermore, although flexibility-ability and flexibility-willingness were positively correlated, they were conceptually and empirically distinguishable; they were also distinct from the related concept of domain permeability.

Table 4
Hierarchical Regressions of Work-Family Conflict Measures on Boundary Flexibility and Permeability Measures

	Family-to-work conflict	Work-to-family conflict
	β	β
Step 1		
Gender[a]	−.02	−.02
Children 18 and under[b]	−.12	−.03
ΔR^2	.00	.00
Step 2		
Family Flexibility-ability	−.37**	−.23**
Family Flexibility-willingness	.01	−.02
Family Permeability	.24**	.19*
Work Flexibility-ability	.20**	−.17*
Work Flexibility-willingness	−.07	.05
Work Permeability	−.11	−.15*
ΔR^2	.13**	.13**
Total R^2	.13	.13
Adjusted R^2	.10	.10
Total F (*df*: 8, 208)	3.94*	3.84**

[a] 1 = Male, 2 = Female. [b] 1 = No children, 2 = Yes children.
* $p < .05$. ** $p < .01$.

In terms of a larger nomological network, the ability and willingness components of boundary flexibility have theoretically meaningful and empirically distinguishable relationships with other variables that are not redundant with one another. Notably, some relationships primarily emphasize the ability component of boundary flexibility (e.g., relationships with demographic characteristics such as work hours and number of children, and relationships with stress outcomes). Others primarily emphasize the willingness component of boundary flexibility (e.g., relationships with gender and domain centrality).

Of note, our results demonstrate support for arguments that gender and domain centrality should be systematically associated with measures of boundary flexibility characteristics. As predicted, women were more willing to leave work for family, and less willing to leave family for work, compared to men, which indicates the relevance of the motivation component of boundary flexibility for understanding gender differences in the work-family interface. On the other hand, gender differences in the ability component of boundary flexibility were only observed for the family boundary, where women reported less ability to flex the family boundary than men reported. Furthermore, as hypothesized, domain centrality was systematically related to measures of the motivational component of boundary flexibility.

Although preliminary in nature, these results support the argument that future research should examine the role domain centrality has in terms of an individual's motivation to protect that role. Additionally, in light of Parasuraman and Greenhaus' (2002) suggestion that researchers turn their attention to how gender might interact with other variables to influence important work-family outcomes, we recommend that an examination of how gender and domain centrality interact in terms of boundary management and important work-family outcomes is a path that could be usefully pursued with measures of boundary management that recognize the distinctions among boundary flexibility ability, flexibility willingness, and boundary permeability.

In contrast to the emphasis on flexibility-willingness that is evident for gender and domain centrality, relationships between boundary flexibility measures and stress-related outcomes of the work-family interface highlight the role of flexibility-ability. Individuals who perceived greater ability to flex their work and family domains generally reported less work-family conflict and less strain at the end of the work day, a finding that is consistent with past research (Kossek et al., 2004, 2006). Again, these results are preliminary but they do indicate that one avenue for future work-family intervention studies to consider is how to help individuals increase perceptions of control over factors that constrain their ability to flex domain boundaries. However, an issue

to note is that, as part of our post hoc regression analysis, work flexibility-ability was actually positively related to family to-work conflict. We speculate that a possible explanation for this finding is that opportunities to flex the work boundary to meet family needs also provide opportunities for family concerns to spill over into the work environment, interfering with accomplishing one's work tasks. Future research may wish to examine whether a cost of high ability to flex the work boundary is higher levels of family to-work conflict.

Although domain flexibility-willingness was clearly distinguishable from flexibility-ability and domain permeability, and it was associated in theoretically meaningful ways with individual characteristics (e.g., gender and domain centrality) that would be expected to covary with flexibility-willingness, we did not find evidence that this facet of boundaries was associated with some of the more traditional stress-related outcome variables that are often emphasized in studies of boundary management practices. Of course this does not imply that flexibility-willingness has no proximal or distal outcomes, but further conceptual and empirical work is needed to better understand how flexibility-willingness fits into the larger work-family nomological network. In light of its conceptual underpinnings as a motivational orientation, it should perhaps not be surprising that the outcomes of flexibility-willingness will differ somewhat from the outcomes of flexibility-ability. For example, domain flexibility-willingness should be related to perceptions of domain blurring (Desrochers et al., 2005) as well as the emerging concept of interdomain transitions (Matthews & Barnes-Farrell, 2006; Winkel & Clayton, 2010). We also recommend consideration of flexibility-willingness as a facet of work-life boundaries that primarily acts in an interactive fashion, in combination with the integration-facilitating function of flexibility-ability.

Another interesting observation from Study 2 is that the work and family flexibility-ability measures were more strongly correlated than the work and family flexibility-willingness measures. It may be that individual difference characteristics (e.g., self-efficacy, general locus of control) influence how individuals perceive situational constraints, both at work and home. Although we can only speculate on the reasons for the positive relationships between perceived ability to flex the work and family domains, the strong correlation between the two flexibility-ability measures warrants future attention. On the other hand, the near-zero relationship between WFW and FFW further demonstrates the uniqueness of the work and family boundaries. In particular, it suggests that the motivational component of boundary flexibility is characterized by distinctive orientations toward the work and family domains rather than a general willingness or unwillingness to take advantage of opportunities to flex domain boundaries.

Finally, from a purely methodological perspective, our results suggest that the negatively worded items included in the scales tended to produce the majority of the model misfit. Development of items that are unidirectionally phrased and the use of other strategies to control for response sets may benefit the measurement characteristics of these scales (for a relevant discussion see Podsakoff, MacKenzie, Lee, & Podsakoff, 2003).

General Discussion and Conclusions

Boundary characteristics are key variables that researchers should incorporate when studying how people manage the work-family interface. Until recently, however, conceptualizations of work and family boundaries have primarily focused on domain permeability and the opportunity of an individual to be flexible in changing the timing and location of domain related behaviors. They have failed to incorporate the idea that workers may also vary in the degree to which they are willing to change the timing and location of domain related behaviors. Consistent with other recent researchers (Kreiner, 2006; Kossek et al., 2004, 2006) we believe that there is an important motivational component to boundary flexibility.

The present studies contribute to the development of work in this area by providing a new set of measures that successfully incorporate this idea. Study 1 provided an initial set of scales to assess flexibility-willingness and flexibility-ability for the work and family domains. In Study 2 we further refined these scales and demonstrated that they are related, but still conceptually and empirically distinct from one another. Furthermore, we demonstrated that the flexibility measures are empirically distinct from measures of domain permeability (Clark, 2002).

As with any study, the present studies have certain limitations. One limitation is the fact that participants in both studies were drawn from Internet samples and were relatively well-educated; to the extent that these samples are overly homogeneous with respect to variables included in the study, this has the potential to affect the magnitude and pattern of observed relationships. Additionally, given the relatively large number of items included in our EFA and CFA models, our sample sizes, although adequate (Kline,

1998), are still relatively small. Nonetheless, both samples included adults from geographically dispersed regions, multiple organizations, multiple organizational levels, multiple employment sectors, and multiple family situations. Likewise, we recognize that these data provide evidence that is cross-sectional and preliminary in nature. Research that evaluates these scales against behavioral measures and other indicators of boundary management practices will provide important information about the larger nomological network surrounding boundary flexibility. Theoretical frameworks like Systems or Ecological theory may be useful in identifying relevant contextual and psychological variables that should be systematically associated with domain boundary characteristics.

Furthermore, we believe that there may be both practical and academic value in making a distinction between aspects of domain flexibility that an individual perceives as not being under his or her control and the willingness of a worker to treat a domain boundary in a flexible way. For example, from the standpoint of organizational policies and interventions, organizations are primarily in a position to affect work flexibility-ability and, to a lesser extent, permeability. Understanding for whom those modifications of the boundary are most likely to be valued and used may require consideration of the motivation component of boundary flexibility that is represented by work flexibility-willingness. A measure of boundary characteristics that includes both perceived situational constraints/opportunities (ability) and personal motivation (willingness) components may be useful in capturing this distinction.

Clearly differentiated measures of boundary characteristics have potential advantages from a more academic perspective as well. Voydanoff (2007) has pointed out that a limitation of the existing work-family literature is a failure to engage in research that incorporates longitudinal hypotheses and designs. As workers move through developmental, career, and family changes, the motivation to treat the work and family boundaries as flexible entities may likewise wax and wane in ways that may or may not be consistent with changes in the flexibility-ability components of work and family boundaries. Measures of boundary flexibility that include flexibility-willingness may offer a useful tool for tracking longitudinal changes in the orientation that workers have toward managing the interface between work and family. More generally, we believe measures that more comprehensively operationalize boundary characteristics, such as those presented here, will be valuable to scholars who wish to test developing theories about the nature and dynamics of the work-family mesosystem.

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Appendix A

Family Domain Items

Instructions: Please read each of the following statements and indicate the degree to which you agree or disagree. It should be kept in mind that when you read the term "personal life responsibilities" this can be related to family commitments, plans you have made with family or friends, or obligations you have relating to family and friends (1 = Strongly Disagree, 2 = Disagree, 3 = Somewhat Disagree, 4 = Neutral, 5 = Somewhat Agree, 6 = Agree, 7 = Strongly Agree).

Family Flexibility-Ability

- **Because of my family and personal life responsibilities, I cannot change my work schedule (for example going in early or staying longer to finish work related responsibilities) [R] (FFA1)**
- **If the need arose, I could work late without affecting my family and personal responsibilities (FFA2)**
- **My family and personal life responsibilities would not prevent me from going into work early if the need arose (FFA3)**
- **My family and personal life responsibilities would not prevent me from going into work an extra day in order to meet work responsibilities (FFA4)**
- **From a family and personal life standpoint, there is no reason why I cannot rearrange my schedule to meet the demands of my work (FFA5)**
- I am able to arrive and depart from home when I want to meet work responsibilities (FFA6)

Family Flexibility-Willingness

- **I am willing to change plans with my friends and family so that I can finish a job assignment (FFW1)**
- **I am willing to change vacation plans that I have made with friends and family to meet work related responsibilities (FFW2)**
- **While at home, I do not mind stopping what I am working on to complete a work related responsibility (FFW3)**
- **I am not willing to cancel plans with my friends and family to deal with work related responsibilities [R] (FFW4)**
- I am willing to miss family related activities (like a school play or dinner with a family member) so that I can finish a job assignment (FFW5)
- I would be willing to miss holidays with my family so that I could go into work and deal with my responsibilities there (FFW6)

Permeability of the family domain

- **I have work related items at my home (FP1)**
- **I think about work related concerns while I am at home (FP2)**
- **I stop in the middle of my home activities to address a work concern (FP3)**
- **I take care of work related business while I am at home (FP4)**
- I hear from people related to my work while at home (FP5)
- I receive work related calls while at home† (FP6)

Note. Bold items were retained in the final Respecified Correlated Factors model and constituate the final version of the measure; Variable names that are underlined (e.g., FFA 2) were retained from Study 1 in Study 2, remaining items were new items developed for Study 2; [R] Reverse Scored; † indicates not available for analysis for technical reasons.

(*Appendices continue*)

Appendix B

Work Domain Items

Instructions: Please read each of the following statements and indicate the degree to which you agree or disagree. It should be kept in mind that when you read the term "personal life responsibilities" this can be related to family commitments, plans you have made with family or friends, or obligations you have relating to family and friends (1 = Strongly Disagree, 2 = Disagree, 3 = Somewhat Disagree, 4 = Neutral, 5 = Somewhat Agree, 6 = Agree, 7 = Strongly Agree)

Work Flexibility-Ability

I am able to arrive and depart from work when I want in order to meet my family and my personal life responsibilities (WFA 1)

If the need arose, I could leave work early to attend to family related issues (WFA 2)

If something came up in my personal life, it would be alright if I arrived to work late (WFA 3)

While at work, I can stop what I am doing to meet responsibilities related to my family and personal life (WFA 4)

Work Flexibility-Willingness

I am willing to take an extended lunch break so that I can deal with responsibilities relating to my family and personal life (WFW 1)

Assuming it was all right with my supervisor, I would not mind arriving to work late so that I could meet my family and personal life responsibilities (WFW 2)

If it became necessary in order to meet my family and personal life responsibilities I would be willing to change the shift, or start stop times, that I normally work (WFW 3)

I am not willing to take time off from work to deal with my family and personal life responsibilities [R] (WFW 4)

I would be willing to compress my normal work week into 4 days rather than 5 if it meant I could better deal with my family and personal life responsibilities (WFW 5)

I see no reason to ever change my work schedule to meet my family and personal life responsibilities [R] (WFW 6)

I am not willing to change plans related to my work so that I can attend to my responsibilities with my friends and family [R]* (WFW 7)

Permeability of the work domain (Clark, 2002)

My family contacts me while I am at work (WP 1)

I have family related items at my work place (WP 2)

I think about family members when I am at work (WP 3)

I hear from my family while I am at work (WP 4)

I stop in the middle of my work to address family concerns (WP 5)

I take care of family business while at work (WP 6)

Note. Bold items were retained in the final Respecified Correlated Factors model and constituate the final version of the measure; Variable names that are underlined (e.g., FFA 2) were retained from Study 1 in Study 2, remaining items were new items developed for Study 2; [R] Reverse Scored; † indicates not available for analysis for technical reasons.

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