WORK AND NONWORK BOUNDARY MANAGEMENT: USING COMMUNICATION
AND INFORMATION TECHNOLOGY

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A Thesis

Submitted to the Graduate College of Bowling Green
State University in partial fulfillment of
the requirements for the degree of

MASTER OF ARTS

December 2009

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ABSTRACT

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The current study investigated individual differences in boundary creation around communication/information technology use at work and nonwork and its association with internal work-nonwork interference. More specifically, it was hypothesized that bidirectional segmentation preference would be positively associated with boundary creation around communication/information technology use at home and work. Work role identification and nonwork role identification were expected to have a negative relationship with boundary creation around communication/information technology use at home and work respectively. Moreover, perceived work group norm on segmentation was tested as a moderator between these individual differences and boundary creation around communication/information technology use in both domains. Data were collected from 265 participants via online survey. The results indicated that bidirectional segmentation preference was positively related with boundary creation in both domains as predicted while there were mixed findings for role identifications. Contrary to expectations, there was no interaction effect of perceived work group norm on segmentation. It was also shown that creating impermeable boundaries around work and home was beneficial in experiencing less internal work-nonwork interference in both domains. Limitations and research implications are discussed.

This thesis is dedicated to my mother and father for their unconditional love and support.

ACKNOWLEDGMENTS

I would like to express my sincere gratitude to my advisor, Steve M. Jex for his guidance and advice throughout my thesis work and graduate life. I would also like to thank my committee members, Charlotte Fritz and William H. O'Brien, for their helpful comments and suggestions to improve the study.

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CHAPTER I: INTRODUCTION

Advancements in communication and information technology have not only been changing the nature of work, but also how people manage boundaries between their work and nonwork lives (Major & Germano, 2006). New mobile information and communication technologies such as notebook computers, cellular phones, Personal Digital Assistants (PDAs), and the Internet have enabled workers to be connected to work 24/7 regardless of their physical presence at work (Kalleberg & Epstein, 2001). Results from the 2002 *National Study of the Changing Workforce* have shown that more than a third of employees use their home computers for work-related tasks. Also, 32% of workers are regularly contacted during nonwork hours about work matters. Likewise, these technologies also allow workers to reach their family members to deal with family matters while they are at work. According to the *Cornell Couples and Career Study*, 36.7% of women and 47.8% men reported that they sent e-mails to family members from work (Chesley, Moen, & Shore, 2003). Nearly half of the sample (49.1%) in this study reported that they used pagers and cellular phones for family use. Communication/information technology uses have blurred the boundaries between work and nonwork domains (Chesley et al., 2003).

The prevalent use of these technologies, however, are both praised and criticized for blurring work and non-work boundaries (Valcour & Hunter, 2005). The advantage of technology is that people can better coordinate and manage their multiple roles in their work and personal lives. For example, a working mother can attend a work-related meeting from home through teleconferencing while she takes care of her sick child, transcending temporal and spatial boundaries between work and home. Nonetheless, the opposite picture shows that the blurred boundaries between work and personal lives often impose a challenge for employees in

balancing work and non-work roles. Work-related roles can easily invade personal and family time because contemporary employees are often expected to be available 24/7 for work (Boswell & Olson-Buchanan, 2007; Gambles, Lewis & Rapoport, 2006; Middleton, 2007; Milliken & Dunn-Jensen, 2005; Towers, Duxbury, Higgins, & Thomas, 2006). Conversely, frequent responding to e-mails and calls from family and friends during work hours can distract one's full attention from work-related tasks. Therefore, managing work and nonwork boundaries becomes an ever more salient issue for both employees and organizations.

Boundary theory (Ashforth, Kreiner, & Fugate, 2000; Nippert-Eng, 1996) and border theory¹ (Clark, 2000) suggest that people vary in how they manage work and nonwork roles by either integrating or segmenting the two domains. However, only a few empirical studies have examined individual boundary management with communication and information technologies as well as its consequences for the work-family interface (e.g., Boswell & Olson-Buchanan, 2007; Chesley, 2005; Olson-Buchanan & Boswell, 2006; Towers et al., 2006). Therefore, the present study is designed to fill the void in the literature by investigating the following three issues: (1) individual factors affecting boundary creation around work and non-work domains with the use of communication and information technology, (2) the moderating effect of individual perception of work group norms on segmentation, and (3) work-nonwork interference as an outcome of boundary creation with the use of communication/information technologies. The following sections introduce the theoretical foundation of this study, *boundary theory*, and the hypotheses for this study.

Boundary Theory

¹ Clark's (2000) terminology 'border' corresponds to 'boundary' in Ashforth et al. (2000) and Nippert-Eng (1996). Both border theory and boundary theory overlap each other with respect to border/boundary management although Clark applied her theory exclusively to work and family domains whereas Ashforth et al. can include other possible third domains such as community and religious life. I will call boundary theory hereafter.

Boundary theory (Ashforth et al., 2000; Nippert-Eng, 1996) views an individual as holding multiple roles (e.g., a worker, a parent, a spouse) in various domains of life wherein different rules, values, thought patterns, and behaviors are applied. These different domains are posited to be demarcated by boundaries that are physical, temporal, or psychological (Ashforth et al., 2000; Clark, 2000; Nippert-Eng, 1996). The most common application of boundary theory has been kept to work-family interface because it is believed that the most central domains for working adults are work and family (Bellavia & Frone, 2005).

People shift from one role to another as they cross boundaries, which are said to have two characteristics: flexibility and permeability (Ashforth et al., 2000; Clark, 2000). *Flexibility* is the degree to which the spatial and temporal boundaries shift, depending on the role demands of one domain or the other (Ashforth et al., 2000; Clark, 2000). In other words, if an employee freely chooses where and when to work so that he/she can perform a role outside of a certain physical and temporal boundary, the boundary of work and non-work is flexible. In contrast, if an employee works only during regular work hours in a designated place and performs his/her parental role during only non-work hours, the boundary between work and family is inflexible.

Permeability is defined as “the degree to which a role allows one to be physically located in the role’s domain but psychologically and/or behaviorally involved in another role” (Ashforth et al., 2000, p. 474). An employee, for example, may make a phone call from work to a doctor to arrange a check-up for a child or he/she may surf the Internet during work hours to plan a family vacation. The worker is physically at work but engages in family matters psychologically and behaviorally. Conversely, an employee who does not usually think of or engage non-work roles at work or work-related roles at home has an impermeable boundary.

Nippert-Eng (1996) found in her qualitative study that people vary in the degree to which they integrate or separate their work and home domains. She posits that people fall somewhere on the continuum of integration-segmentation with respect to work and nonwork boundary management. According to boundary theory, inflexible and impermeable boundaries tend to facilitate segmentation between work and non-work roles, whereas flexible and permeable boundaries tend to be associated with integration of the two domains. Shifting roles between work and non-work domains is relatively easier when the two domains are integrated rather than segmented, yet this role transition comes with a cost (Ashforth et al., 2000). Those who choose to work at home, for example, can easily shift back and forth from work to domestic roles, but their work can be also disrupted by family matters. In contrast, when work and non-work domains are highly segmented, role transition is relatively more effortful and difficult than when they are integrated. Ashforth et al. (2000) illustrate this with an example of a police interrogator who separates work and family domains. His segmentation strategy clarifies his roles as an interrogator and a parent, and prevents interruption from cross-roles. However, the segmentation may require more effort and time in role transitioning given the sharp contrast between the two roles; he is expected to show warmth as a father whereas he has to be aggressive as an interrogator. In sum, some people draw a very clear line between work and non-work domains, whereas others blur the boundaries between work and non-work.

However, one thing to be noted is that work and nonwork domains are not necessarily bi-directionally integrated or segmented (Olson-Buchanan & Boswell, 2006). Some work conditions may demand that employees be flexible about their family domain so that the work can be brought home, while at the same time discouraging family matters to be brought into workplace. In this case, the work boundary is stronger than the home boundary. On the other

hand, some people may be able to deal with family matters from work and work issues from home. In this case, both work and home domains are integrated reciprocally. The borders can be either stronger or weaker depending on the strength of the situation, the context, and the culture of the focal domain (Ashforth et al., 2000; Clark, 2000). Therefore, in order to get the full picture of work and nonwork boundary management, it is important to look at both domains together and consider the social norms of creating boundary strength (Ashforth et al., 2000). The following sections discuss individual factors affecting boundary management using communication/information technologies.

Preference for Integration-Segmentation and Boundary Creation around Communication and Information Technology Use

According to boundary theory (Ashforth et al., 2000; Nippert-Eng, 1996), individuals have idiosyncratic ways of constructing boundaries around work and home. One of the real-life examples from Nippert-Eng's (1996) qualitative study is that some people keep two separate calendars and key chains for work and personal domains, not bringing the matters of one domain to the other. On the contrary, some people keep only one key chain and calendar which combine both work and home domains, allowing one domain to cross over into the other. In short, people have their own preference and desire to integrate or segment work and non-work domains (Ashforth et al., 2000; Clark, 2000; Kossek, Lautsch, & Eaton, 2005; Kreiner, 2006; Nippert-Eng, 1996; Rothbard, Phillips, & Dumas, 2005).

As technology is rooted in our daily lives enabling people to transcend physical, temporal, psychological boundaries between work and personal domains, individuals may develop their own strategies to facilitate integration or segmentation with the use of communication/information technologies (CITs hereafter). Therefore, it is worth investigating

how individuals impose their own rules or guidelines for using CITs as a boundary management strategy based on their preference for integration-segmentation (Olson-Buchanan & Boswell, 2006). The qualitative study by Golden and Geisler (2007) has shown that people have different patterns of using PDAs: life-intensive, work-intensive, and integration. That is, some people use a PDA mainly for work-related matters, some use it for primarily personal matters, and others use it for both. According to this study, PDA users also have different motives for PDA use. For some people, the intention is to segregate work and personal life (e.g., confining work, protecting the private schedule), but for others it is to integrate both domains (e.g., transitioning between work and non-work, making work mobile). These different patterns and motives of using PDAs may be applicable to other CIT uses (e.g., cellular phones, laptops, pagers, e-mails) for boundary management between work and non-work domains. There may be, for instance, people who screen incoming calls after work so they do not get involved in work-related roles at home, whereas others do not limit the use of cellular phones for work purposes during family time. Also, there may be employees who respond to personal e-mails at work and others who restrict e-mail exclusively to work-related communication. Therefore, there can be boundary creation around CIT uses both at work and nonwork domains.

The recent quantitative study by Olson-Buchanan and Boswell (2006) has shown that those who bring work home and refer to their work roles at home, tend not to engage in boundary creation using CIT during non-work time. On the other hand, people who respond negatively to work interruption during non-work time tend to create boundaries using CIT during non-work hours. Although very limited research is available, the results from the aforementioned studies suggest that employees create their own rules and restrictions of CIT use to manage work

and non-work boundaries based on how much they prefer integration or segmentation of the two domains.

However, Olson-Buchanan and Boswell (2006) examined individuals' boundary creation around CIT use to perform work roles only from the *non-work* domain. They did not look at boundary setting for CIT use to fulfill non-work roles from the *work* domain. Ashforth et al. (2000) and Clark (2000) argued that integration-segmentation of work and non-work is not reciprocal, and directionality between the two domains is important for consideration given that the strength of boundaries is different based on the power of the two domains. Moreover, the results of Frone, Russell, and Cooper (1992) suggested that work and family boundaries are asymmetrically permeable with more work-to-family interference than family-to-work interference. Thus, there is a need to investigate individuals' boundary creation around CIT use from both work and non-work domains.

In the *home domain*, people who prefer separating work from the home domain, for example, may limit the use of a home computer to e-mail supervisors or coworkers or a cellular phone for work-related matters. On the other hand, people who prefer integrating work into the non-work domain (low preference for segmenting work from home) may be less likely to restrict the uses of laptops, cellular phones, PDAs, or pagers at home to do work or contact work-related people. In the *work domain*, those who prefer segmenting the nonwork roles from the work domain may be less likely to accept a cellular phone call from family members while in their office. They may also be more likely to restrict the use of office computers to work-related tasks than those who do not prefer segmenting nonwork roles from the work domain. Conversely, people who prefer integrating nonwork into the work domain (low preference for segmenting nonwork from work) may be more likely to respond to e-mails or calls to do non-work related

roles from work. Thus, people who prefer segmentation from each domain may be more likely to create boundaries around CIT use in each domain than those who prefer integration (low preference for segmentation).

Hypothesis 1A: Preference for segmenting work from nonwork domains will be positively related to boundary creation through the use of communication/information technologies in order to *perform work-related roles at home*. In other words, people who prefer segmenting work roles from the nonwork domain will be more likely to impose restrictions on the use of CIT at home for work purposes.

Hypothesis 1B: Preference for segmenting nonwork from work domains will be positively related to boundary creation through the use of communication/information technologies in order to *perform non-work roles at work*. In other words, people who prefer segmenting nonwork roles from the work domain will be more likely to impose restrictions on the use of CIT at work for nonwork purposes.

Role Identification and Boundary Creation around Communication and Information Technology Use

Role identification has been proposed as another individual factor that may affect boundary creation and maintenance (Ashforth et al., 2000; Clark, 2000). Role identification occurs “when a role occupant defines himself or herself at least partly in terms of the role and its identity” (Ashforth et al., 2000, p. 483). When a person identifies with a role domain and sees it as important to their self-concept, they are committed to the focal domain and place high value

on that aspect of themselves (Stryker, 1980). People with a high level of role identification in a certain domain are more likely to shape the domain in a way that makes them more involved in that domain and attempt to integrate the role with one's other roles while in other domains (Ashforth et al., 2000; Clark, 2000). Also, Clark argues that boundary management cannot be attained without identification with roles and activities involved in both work and home domains. In fact, empirical studies have shown that role identification was significantly associated with individual boundary enactment (Boswell & Olson-Buchanan, 2007; Olson-Buchanan & Boswell, 2006). Specifically, work-role identification was related to fewer boundaries for CIT use when performing work-roles during nonwork times. Also, a high level of job involvement, indicating strong identification with work-roles, was positively associated with the amount of CIT use to do work after work hours.

These two studies (Boswell & Olson-Buchanan, 2007; Olson-Buchanan & Boswell, 2006) are noteworthy in that they first began to investigate individual factors that are related to CIT use at home and boundary creation around CIT use; nonetheless they both have an important limitation. Olson-Buchanan and Boswell (2006) did not investigate how *non-work role identification* is associated with boundary setting for CIT use at work to engage non-work roles. Rather, they just examined the relationship between work-role identification and boundary creation at home. Also, Boswell and Olson-Buchanan (2007) did not examine CIT use at work, but only at home. However, the positive correlation between nonwork role identification and permeability of the work domain in their study implies a potential association between nonwork role identification and boundary creation of CIT use at work to perform nonwork roles. In other words, people with a high level of nonwork-role identification may create and maintain a

permeable work domain by having fewer boundaries around CIT use, so that they could fulfill family-related roles from work as needed.

Hypothesis 2A: Work-role identification will be negatively related to boundary creation through the use of communication/information technologies in order to perform *work-related roles at home*. In other words, people who highly identify themselves with work-roles will be less likely to impose restrictions on the use of CIT at home for work purposes.

Hypothesis 2B: Nonwork role identification will be negatively related to boundary creation through the use of communication/information technologies in order to perform *nonwork roles at work*. In other words, people who highly identify themselves with nonwork roles will less likely to impose restrictions on the use of CIT at work for nonwork purposes.

The Moderating Effect of Perceiving the Work Group Norm on Segmentation

Boundary theory (Ashforth et al., 2000; Nippert-Eng, 1996) has suggested that social domains in which individuals are embedded can strongly affect the creation, maintenance, and transitioning of role boundaries between work and non-work. The social norms within groups regarding how people are expected to manage work and non-work domains may differ across occupations, job types, organizational strata and its cultures (Ashforth et al., 2000; Lambert & Waxman, 2005; Nippert-Eng, 1996; Valcour & Hunter, 2005). Among others, the work group is a unit where the occupational and organizational policies, guidelines, and messages can be

further reinforced or rejected in a variety of covert and overt ways (Nippert-Eng, 1996). Even when employees stay within the same organization and/or occupation, the different work groups they belong to can impose different demands on how to manage work and personal boundaries. There may be, for instance, a work group where the members have regular social events outside of work whereas members of another work group do not have anything to do with each other even during lunch time at work. When it comes to using CIT, there may be work group members who freely contact each other outside of work to discuss work-related issues via instant messaging or cellular phones, but there may be those who almost never contact each other after they walk out of the office. Conversely, there may be work groups where personal calls or e-mailing during work times are not accepted implicitly or explicitly and others where employees freely use CIT to accommodate non-work roles.

As individuals do not necessarily create bidirectionally similar boundaries around work and nonwork, the work group also can have different demands on domain permeability. For example, a work group may expect its members to segment family from work, but not segment work from family. People in such a work group may bring work home but restrain themselves from taking care of family responsibilities at work. In contrast, a work group may let people forget about work when they are at home (segmenting work from nonwork) but allow people to accommodate nonwork related roles at work (not segmenting family from work). Alternatively, a work group may encourage highly integrated work and home domains from both directions, letting work flow into nonwork domain and nonwork into work domain. The members in this type of work group may perform nonwork roles at work as well as take care of work matters at home.

However, individuals may vary in perceiving the work group norms (Cialdini & Trost, 1998). A *subjective norm* is “the person’s perception that most people who are important to him think he should or should not perform the behavior in question” (Fishbein & Ajzen, 1975, p.302). It implies the possibility that there may be variations from individual to individual within the same work group regarding the degree to which the work group norm is important in creating more or less permeable boundaries around work and nonwork domains. Therefore, the individual perception of how work group members create boundaries between work and nonwork may influence one’s own boundary creation around these domains. For example, even though an employee desires to separate work from the non-work domain, he/she may create fewer boundaries around CIT use at home if he/she has a strong perception that the members of the work group are expected to be available for work matters during non-work times. On the other hand, if an employee perceives that his/her work group discourages its group members from freely contacting or being contacted by family members and accommodating non-work roles during regular work hours, one may be likely to restrain from using cellular/office phones, e-mails, and the Internet for non-work purposes although this person highly identifies him/her with non-work roles. Therefore, how one perceives the work group norm regarding setting more or less permeable boundaries of work and nonwork may either weaken or strengthen the effect of preference for integration-segmentation and role identification on boundary creation (Ashforth et al., 2000; Nippert-Eng, 1996). The proposed moderating effects are also presented in Figures 1 and 2.

Hypothesis 3A-1: Individual perception of the work group norm on segmenting work from nonwork domains moderates the positive relationship between the preference for

segmenting *work from nonwork domains* and boundary creation of technology use *at home*. The positive relationship will be stronger when employees perceive a strong norm within their work group supporting segmenting work from nonwork domains.

Hypothesis 3A-2: Individual perception of the work group norm on segmenting *nonwork from work domains* moderates the positive relationship between the preference for segmenting *nonwork from work domains* and boundary creation of technology use *at work*. The positive relationship will be stronger when employees perceive a weak norm within their work group supporting segmenting nonwork from work domains.

Hypothesis 3B-1: Individual perception of the work group norm on segmenting *work from nonwork domains* moderates the negative relationship between *work-role identification* and boundary creation of technology use *at home*. The negative relationship will be stronger when employees perceive a strong norm within their work group supporting segmenting work from nonwork domains.

Hypothesis 3B-2: Individual perception of the work group norm on segmenting *nonwork from work domains* moderates the negative relationship between *nonwork-role identification* and boundary creation of technology use *at work*. The negative relationship will be stronger when employees perceive a weak norm within their work group supporting segmenting nonwork from work domains.

The Effect of Boundary Creation around Communication and Information Technology Use on Work-nonwork Interface

Boundary theory (Ashforth et al., 2000) suggests that permeable boundaries help people make a relatively easy transition between work and nonwork roles, but it also increases the chances of interference or distraction by cross-role demands. Carlson and Frone (2003) have recently proposed a new component of work-family interference, *internal work-family interference*. Especially, internal work-family interference captures the internally generated psychological preoccupation with one domain (e.g., family) when one is in the other domain (e.g., work), thereby interfering with one's ability to be engaged in the focal domain roles. For example, when one ruminates about unfinished work tasks when he/she is at home, this preoccupation likely inhibits one's full involvement in family roles.

External work-family interference, however, refers to the interference occurring when externally generated demands in one role inhibit participation in another role (Carlson & Frone, 2003). For example, there may be a situation where one's frequent business trips prevent his/her participation in various family events. Most of the past research on work-family interface has focused on externally generated work-family conflict (e.g., time-based work-family conflict), overlooking the idea that work-family conflict can occur not only from external factors but also from internal processes such as rumination or distractions (Cardenas, Major, & Bernas, 2004; Carlson & Frone, 2003). Given the prevalence of CIT use in work and home domains contributing to the enactment of other roles, internal work-family interference may be a more relevant outcome variable to understand the psychological cost of role transitioning between more or less permeable boundaries.

If an employee erects few boundaries around CIT use for work-related roles at home, then he/she will have more permeable home domain where work roles are easily enacted, but he/she may not be able to be fully involved in family roles. Conversely if a worker creates few boundaries around CIT use for family-roles at work, he/she will have a more permeable work domain where nonwork roles are easily enacted, but the work may be distracted by the frequent enactment of nonwork roles. Therefore, fewer boundary creations around CIT use may increase internal work-nonwork interference by psychologically and behaviorally engaging in other roles.

Hypothesis 4A: Boundary creation around CIT use outside of work will be negatively related to internal work-to-nonwork interference.

Hypothesis 4B: Boundary creation around CIT use at work will be negatively related to internal nonwork-to-work interference.

CHAPTER II: METHOD

Participants and Procedures

A total of 4,685 alumni of College of Business and Master in Business Administration (MBA) program from Bowling Green State University (BGSU) in Ohio who were presumed to be employed were randomly retrieved from the alumni database. A recruitment e-mail was sent out to the alumni inserted with an online survey link titled, "Employees' Work and Nonwork Boundary Management using Communication/Information Technology." The e-mail message introduced the study and pledged protection of confidentiality of their responses. To increase response rate, the respondents were asked to provide their name and e-mail address at the end of the survey if they wished to be entered into a random drawing for eight electronic gift certificates (Amazon.com), each worth \$50, in return for their submission of a completed survey². On the online survey web page, it was noted that completion and submission of the online survey indicated their consent to participate in the study. The online survey had been available for one month period from January 15, 2009 to February 15, 2009 in order to collect responses.

Of the original 4,685 e-mails sent out, 262 were returned as undeliverable. Of the 4,423 alums who were presumed to receive the recruitment e-mail, 431 participants completed the online survey yielding response rate of 10%³. Research on Web-based survey method has shown that online survey tends to produce lower response rates compared to other methods (Kraut, Olson, Mahzarin, Bruckman, Cohen, & Couper, 2004; Paolo, Bonaminio, Gibson, Partridge, & Kallail, 2000), but there does not seem to be significant differences in findings compared to other methods (Gosling, Vazire, Srivastava, & John, 2004). A total of 133 respondents were excluded

² Eight randomly selected respondents received electronic gift card on February 23, 2009.

³ Participants from the MBA and College of Business graduates were combined as one group for data analysis because the means of the dependents variables between the two groups were not significantly different; boundary creation around CIT use at home ($t = .02$, $p = .98$) and at work ($t = -.13$, $p = .90$), as well as work-to-nonwork interference ($t = .23$, $p = .82$) and nonwork-to-work interference ($t = -1.6$, $p = .11$).

because they did not fit the sample criteria; self-employed ($n = 27$), not employed/retired ($n = 34$), virtual office worker/telecommuter ($n = 56$), and working outside of office ($n = 16$). Because of missing data on demographic variables and other study variables ($n = 33$), only completed responses were used for all of the analysis, which resulted in a final sample of 265 respondents.

The mean age of the final sample was 46 years ($SD = 8.74$, range = 24-64 years); 65.3% ($n = 173$) were male and 34.7% ($n = 92$) were female. The sample was composed of 255 Whites and 10 Non-whites. In terms of marital status, 77.4% ($n = 205$) were married; 10.6% ($n = 28$) were single; 8.7% ($n = 23$) were divorced or separated; 3% ($n = 8$) were cohabited; and 0.4% ($n = 1$) was widowed. Approximately 50.2% ($n = 132$) of participants reported being responsible for more than 1 child under 18 years old and 49.8% ($n = 133$) reported having no child (range = 0-5). The average job tenure was 8.10 years ($SD = 8.03$, range = 0.13-38.50 years).

When it comes to availability and use of CIT in the present sample, the majority of the participants used one of the CITs in the work and home domains to perform cross-roles (i.e., work roles at home, nonwork roles at work). On average, 58% of the participants reported using CITs more often than *sometimes* for their cross-roles (please refer to Table 1 for more details). Therefore, underuse or non-availability of CIT in this sample was not a concern for the study.

Measures

Independent Variables

Preference for Segmenting Work from Nonwork Domain. Four items of segmentation preference from Kreiner (2006) was used on a 7-point Likert-type scale of (1) strongly disagree to (7) strongly agree. Example items included: “I don’t like to have to think about work while

I'm at home" and "I don't like work issues creeping into my home life." The alpha coefficient was .94 in this study.

Preference for Segmenting Nonwork from Work Domain. Kreiner's (2006) four item scale of segmentation preference was adapted in parallel with preference for segmenting work from nonwork. Participants responded on a 7-point Likert scale (1 = strongly disagree, 7 = strongly agree) to items such as: "I don't like to have to think about family/personal matters while I'm at work" and "I don't like family/personal issues creeping into my work life." The alpha coefficient was .90 in this study.

Work Role Identification. This was measured with ten items from Kanungo's (1982) scale of work role identification. Participants responded on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree) to items such as: "The most important things that happen to me involve my job/profession" and "I consider my job to be very central to my existence." The alpha coefficient was .85 in this study.

Nonwork Role Identification⁴. This was measured with eight items from Olson-Buchanan and Boswell's (2006) adapted items, which were originally from Yogev and Brett's (1985) family involvement scale to capture nonwork more generally. A 5-point Likert-type format was used ranging from (1) strongly agrees to (5) strongly disagree. Example items included: "I would be a less fulfilled person without my role(s) in my personal and family life" and "A great satisfaction in my life comes from my role(s) in my personal and family life." The alpha coefficient was .83 in this study.

Moderating Variables

⁴ Adapted nonwork role identification items in parallel with Kanungo's work role identification scale was also used; however, there was no difference in the results of the hypothesis tests between the adapted nonwork role identification scale from Kanungo and Yogev and Brett's nonwork role identification scale.

Perception of Work Group Norm on Segmenting Work from Nonwork Domain. Five items was adapted from Kreiner's (2006) segmentation supplies scale. It was measured on a 7-point Likert response format ranging from (1) strongly disagree to (7) strongly agree. Example items included: "The people I work with keep work matters at work," and "The people I work with prevent work issues from creeping into their home life." The alpha coefficient was .85.

Perception of Work Group Norm on Segmenting Nonwork from Work Domain. The correspondent five items were adapted from Kreiner's (2006) segmentation supplies scale to represent segmenting nonwork from the work domain. Participants responded on a 7-point Likert scale (1 = strongly disagree, 7 = strongly agree) to items such as: "The people I work with keep family/personal matters at home" and "The people I work with are expected not to bring family/personal matters to work." The alpha coefficient was .82.

Dependent Variables

Boundary Creation of CIT Uses at Home. Seven items from Olson-Buchanan and Boswell (2006) were measured on a 5-point Likert-type format ranging from (1) strongly agrees to (5) strongly disagree. Higher scores indicate greater boundary creation around CIT use during nonwork time for work purposes. Example items included: "I limit the amount of time or when I use communication/information technologies for work purposes during nonwork hours (for example, only until 7 p.m.)" and "I do not use communication/information technologies for work purpose during the weekends." The respondents were given the examples of communication and information technologies (e.g., the Internet, computers, instant messaging, mobile phones, pagers, faxes, PDAs, e-mails). The alpha coefficient was .81.

Boundary Creation of CIT Uses at Work. Parallel items were adapted from Olson-Buchanan and Boswell's (2006) instrument to capture boundary creation around CIT use at work.

A 5-point Likert-type format ranging from (1) strongly agrees to (5) strongly disagree was used. High scores represent greater boundary creation around CIT use at work for nonwork purposes. Sample items included: “I limit when I use communication/information technologies for nonwork purposes during work hours (for example, only during lunch time)” and “I restrict the use of work computers exclusively to work purposes.” The alpha coefficient was .81.

Internal Work-Nonwork Interference. Six items from Carlson and Frone’s (2003) internal work-family interference measure was adapted to capture nonwork more generally. Each three items measured both work-to-nonwork and nonwork-to-work directions using a 5-point frequency-based response scale that ranged from (1) almost never/never to (5) almost always/always. For internal work-to-nonwork interference, example items included: “When you are at home, how often do you think about work-related problems?” and “When you are at home, how often do you think about things you need to accomplish at work?” The alpha coefficient was .86 in the study. For internal nonwork-to-work interference, example items included: “When you are at work, how often do you think about nonwork-related problems?” and “When you are at work, how often do you think about things you need to accomplish at home?” The alpha coefficient was .81 in the study.

Control Variables

Age, sex, marital status, and number of children were collected as a control variable because these demographics are likely to be related to work-family interference (see Byron, 2005). Race was also controlled because it was related to one of the dependent variables (boundary creation around CIT use at home) in the current data. In addition, the Factual Job Autonomy scale (Spector & Fox, 2003) was used to measure job autonomy as a control variable because employees with a high level of job autonomy might have more control over their work

schedules and tasks which, in turn, might affect the dependent variables in this study. The scale consists of 10 items, with 7 items following the question “In your present job, how often do you have to ask permission...” and 3 items following the question “How often do the following events occur in your present job?” There are 5 response options, with the first group of questions having the anchors *Never*, *Rarely*, *Sometimes*, *Quite often*, *Extremely often or always*, and the options such as “...to leave early for the day?” and “to take time off?” The second group of questions having the anchors *Never*, *Once or twice*, *Once or twice per month*, *Once or twice per week*, *Every day* and the options such as “someone tell you what you are to do?” and “someone tell you when you are to do your work?” All of the items were reverse-scored so that high scores indicate high job autonomy. The alpha coefficient was .81 for the combined scales in this study.

Analysis

First, the means, standard deviations, and range were computed for all variables. Bivariate correlations were analyzed for all variables. To check the internal consistency reliability for all scales, Cronbach’s alpha was computed.

Separate hierarchical regression analyses were conducted to test whether the independent variables (i.e., preference for segmenting work from nonwork, preference for segmenting nonwork from work, work role identification, and nonwork role identification) predicted domain specific boundary creation around CIT use (at home and work). Also, another separate hierarchical regression analyses were conducted to test whether domain specific boundary creation around CIT use predicted bidirectional internal work-nonwork interference respectively. Throughout these separate regression analyses, the control variables were entered in the first step, followed by the independent variables. Also, for each

regression analysis, normal p-p plot and normal distribution of errors were checked for violation of multiple regression assumptions.

To test the moderating effect of perceptions of work group norms, regression analyses followed the steps outlined by Cohen, Cohen, West, and Aiken (2003) for obtaining accurate standardized estimates. This included: (1) all independent variables were standardized before entry into the regression equation, (2) cross-product terms between standardized independent variables and perception of work group norm scores were computed, and (3) the cross-product terms were entered into the regression equation in the last step after entering the control variables first and then the independent variables.

CHAPTER III: RESULTS

Descriptive Statistics

Descriptive statistics are presented in Table 2 including means, standard deviations, observed and possible ranges, and Cronbach's alpha coefficients. The alpha coefficients for all scales used in this study showed high internal consistency, with a range $\alpha = .79$ to $\alpha = .94$. The distributions of all study variables showed skewness less than 1 and a normal distribution.

Intercorrelations among the variables are presented in Table 3.

Main Effects of Preference for Segmentation and Role Identification

Complete results of the hierarchical regression analyses for boundary creation around CIT use at home and work are presented in Table 4 and 5 respectively. For each analysis, the demographic covariates (sex, race, marital status, number of children, and job autonomy) were entered on step one, followed by the predicting variables, role identification and preference for segmentation.

Table 4 shows the results for hypothesis 1A and 2A. Hypothesis 1A stated that preference for segmenting work from nonwork domain would be positively related to boundary creation around CIT use at home. Preference for segmenting work from nonwork domain was a significant predictor of boundary creation around CIT use at home ($\beta = .31, p < .01$), so hypothesis 1A was supported. Hypothesis 2A was tested whether work-role identification would be negatively related to boundary creation around CIT use at home in order to perform work-related roles at home. Work role identification was found to be a marginally significant predictor of boundary creation around CIT use at home ($\beta = -.12, p = .05$); hence there was only marginal support for hypothesis 2A. These independent variables (preference for segmenting work from

nonwork, work role identification) explained about 17% of the variance in boundary creation around CIT use at home ($\Delta F = 18.46, p < .001$) along with perceived work group norm.

Table 5 presents the results for hypothesis 1B and 2B. Hypothesis 1B stated that preference for segmenting nonwork from work domain would be positively related to boundary creation around CIT use at work. As expected, preference for segmenting nonwork from work domain was a significant predictor of boundary creation around CIT use at work ($\beta = .24, p < .01$), supporting hypothesis 1B. Hypothesis 2B predicted that nonwork role identification would be negatively related to boundary creation around CIT use at work in order to perform nonwork roles at work. However, nonwork role identification was not a significant predictor of boundary creation around CIT use at work ($\beta = .06, p = .36$); therefore hypothesis 2B was not supported. These independent variables (preference for segmenting nonwork from work, nonwork role identification) explained about 7% of the variance in boundary creation around CIT use at work ($\Delta F = 6.21, p < .001$) along with perceived work group norm.

Moderating Effect of Perceived Work Group Norm on Segmenting Work and Nonwork

Hypotheses 3A-1, 3B-1, 3A-2, and 3B-2 examined whether there would be a moderating effect of perceived work group norm on the relationship between role identification and boundary creation around CIT use, as well as the relationship between preference for segmentation and boundary creation around CIT use. Sex, race, marital status, number of children, and job autonomy were entered as control variables, and then predicting variables along with the moderating variable were entered into the second step. In the last step, interaction term was entered.

Hypothesis 3A-1 stated that individual perception of the work group norm on segmenting *work from nonwork domains* would moderate the positive relationship between the preference

for segmenting *work from nonwork domains* and boundary creation of CIT use *at home*. As it is shown in Table 4, the interaction between perceived work group norm and preference for segmentation in predicting boundary creation around CIT use at home was not significant ($\beta = .03, p = .60$), so hypothesis 3A-1 was not supported. Hypothesis 3B-1 predicted individual perception of the work group norm on segmenting *work from nonwork domains* would moderate the negative relationship between *work-role identification* and boundary creation of CIT use *at home*. The interaction term between perceived group norm and work role identification was not significant in predicting boundary creation of CIT use at home ($\beta = -.02, p = .73$), thus hypothesis 3B-1 was not supported.

Hypothesis 3A-2 stated that individual perception of the work group norm on segmenting *nonwork from work domain* would moderate the positive relationship between the preference for segmenting *nonwork from work domain* and boundary creation of CIT use *at work*. As presented in Table 5, the interaction term between perceived work group norm and preference for segmenting nonwork from work was not significant ($\beta = -.09, p = .17$), so hypothesis 3A-2 was not supported. Hypothesis 3B-2 was to test whether individual perception of the work group norm on segmenting *nonwork from work domain* would moderate the negative relationship between *nonwork-role identification* and boundary creation of CIT use *at work*. The interaction term between perceived group norm and nonwork role identification was not significant in predicting boundary creation around CIT use at work ($\beta = .02, p = .81$), so hypothesis 3B-2 was not supported.

Main Effect of Boundary Creation around CIT Use at Work and Home

With respect to internal work-to-nonwork interference as well as internal nonwork-to-work interference, Table 6 and 7 present the complete results of the hierarchical regression

analyses. For each analysis, the demographic covariates sex, race, marital status, number of children, and job autonomy were entered on step one, followed by the predicting variables, boundary creation around CIT use at home and work. Hypothesis 4A predicted that boundary creation around CIT use outside of work would be negatively related to internal work-to-nonwork interference. As it is shown in the Table 6, boundary creation around CIT use outside of work was a significant predictor ($\beta = -.50, p < .001$) explaining 24% of the variance in internal work-to-nonwork interference ($\Delta F = 85.62, p < .001$). Therefore, hypothesis 4A was supported. Table 7 presents the result for hypothesis 4B which predicted that boundary creation around CIT use at work would be negatively related to internal nonwork-to-work interference. As expected, boundary creation around CIT use at work was a significant predictor ($\beta = -.37, p < .001$) explaining 13% of the variance in internal nonwork-to-work interference ($\Delta F = 42.00, p < .001$); thereby hypothesis 4B was supported.

CHAPTER IV: DISCUSSION

The purpose of this study was to empirically test whether individual factors (i.e., individual segmentation preference and role identification) as well as perceived work group norms on segmentation were associated with employees' boundary creation around CIT use at home and work; and to investigate how boundary creation around CIT use was associated with internal work-nonwork interference drawing upon boundary theory (Ashforth et al., 2000; Clark, 2000; Nippert-Eng, 1996). Unlike previous studies (e.g., Kreiner, 2006; Olson-Buchanan & Boswell, 2006), this study examined both directions of segmentation preference (work from nonwork, nonwork from work) and their domain specific relationship with boundary creation of CIT use. Also, the study focused on internal work-nonwork interference that had been largely ignored in the work-family interface literature. The main findings are discussed based on each domain of work and nonwork, followed by implications and limitations of the study.

Segmentation Preference and Boundary Creation

In this study, employees with stronger preference for segmenting work from nonwork domains reported creating more boundaries around CIT use at *home*. Conversely, employees with stronger preference for segmenting nonwork from work domains reported having more boundaries around CIT use at *work*. Results indicated that this bidirectional nature of segmentation preference had a domain specific association with boundary creation of CIT use. Therefore, it supports the idea that individuals can have two different segmentation preferences (work from nonwork and nonwork from work domains) and shape asymmetric boundaries at home and work based on their segmentation preference. For instance, the individuals with high preference for segmenting work from nonwork domains but little preference for segmenting nonwork from work domains may keep permeable work boundaries but impermeable home

boundaries at the same time. In sum, the findings provide evidence that individuals do fall on the continuum of segmentation-integration to manage their work and nonwork domains by creating more or less permeable/impermeable boundaries around CIT use at home and work based on their preference for segmentation.

Role Identifications and Boundary Creation

The findings indicated that employees with a high level of work role identification were less likely to create boundaries around CIT use at *home*. This can be interpreted to mean that individuals who have higher work role identification think their work roles are central to their life; thereby they are less likely to impose self-restrictions on CIT uses in order to enact their work roles in the *nonwork domain*. In other words, people with high work role identification tend to maintain permeable home boundaries so that they can easily involve in their work roles while they are at home. On the contrary, nonwork role identification did not have a significant negative relationship with boundary creation around CIT use in the work domain. One potential explanation for this nonsignificance could be due to organizational factors that this study did not measure. For example, for some respondents, there may have been an explicit organizational policy to discourage CIT use on the job for nonwork purposes, which might have negated the association between nonwork role identification and boundary creation of CIT use at work.

On the other hand, interestingly, additional exploratory regression analysis showed that work role identification had a significant positive relationship with boundary creation of CIT use at *work*⁵ too; note that this relationship was not hypothesized. In other words, work role identification in this data seemed to be associated with boundary creation of CIT use in both domains; shaping permeable home boundaries yet impermeable work boundaries so that work

⁵ Work role identification ($\beta = .16$, $p = .01$) predicting boundary creation of CIT use at work; nonwork role identification ($\beta = .10$, $p = .15$) predicting boundary creation of CIT use at work.

related roles could be easily enacted outside of work but protected from nonwork related matters when they were at work. Overall, segmentation preference had a stronger relationship with boundary creation around CIT use than that of role identification⁶.

Moderating Effect of Perceived Work Group Norm

Contrary to expectations, none of the moderation effects of perceived work group norm were significant in this study. One possible reason for the absence of interaction may have been low statistical power. It is well-known that the power to detect significant interaction effects in multiple regression analysis is typically low (Aguinas, 2004). Another potential explanation may include sample artifacts; that is, some participants in this sample might not have been members of work groups. However, the main effect of perceived work group norm on segmenting work from nonwork domain on boundary creation around CIT use at home was significant (see Table 3) although its main effect was not hypothesized. It can be interpreted that employees who perceive high work group norm on segmenting work from home domains tend to maintain impermeable home boundaries, conforming to their work group norm.

Boundary Creation around CIT Use and Internal Work-Nonwork Interference

As expected, boundary creation around CIT use at home was negatively associated with internal work-to-nonwork interference. This suggests that individuals keeping impermeable home boundaries are less likely to experience psychological distraction from their nonwork life due to work matters. This finding suggests that individuals who shape impermeable boundaries at home (segmentation) may have more psychological benefits in reducing internal work-to-nonwork interference as opposed to those who maintain permeable home boundaries

⁶ z-tests for comparing two dependent correlations on the same subjects (DeCoster, 2007) showed significant differences; $z = 7.25, p < .0001$ for comparing r (preference-boundary creation at home) and r (work role identification-boundary creation at home); $z = 2.64, p < .01$ for comparing r (preference-boundary creation at work) and r (nonwork role identification-boundary creation at work).

(integration). Conversely, in the work domain, boundary creation around CIT use at work was negatively associated with internal nonwork-to-work interference. This result also provides evidence that employees maintaining impermeable work boundaries tend to experience less psychological interference with nonwork matters while they are at work. In sum, the results support the notion that segmentation, as opposed to integration, can be a better strategy for work-nonwork boundary management in order to prevent psychological interference between work and nonwork.

Theoretical and Practical Implications

In the traditional work environment where employees had relatively clear physical and psychological boundaries between work and home without instant messaging or cellular phone technologies, segmentation was a given. As our work and nonwork boundaries become ever more blurred due to increasing use of CIT, the outcomes of this study on segmentation in work-nonwork management provides some important theoretical and practical implications.

First, the study results empirically supported boundary theory that there is individual difference in segmentation preference to manage work and nonwork which was shown to be related to the actual boundary management. Second, different from the past research on boundary management (Kreiner, 2006; Olson-Buchanan & Boswell, 2006), this study found the bidirectional nature of segmentation preference, and its domain specific association with boundary creation. The current finding is in line with a recent study that also examined the bidirectional segmentation preference and its distinctive outcomes (Methot & LePine, 2009). For example, it has been shown that participants with strong preference for segmenting family from the work domain were less inclined to initiate a romantic relationship with a coworker, even after controlling for physical attractiveness of the potential date and personality (Methot & LePine,

2009). Taken together, the bidirectional nature of segmentation preference and the domain specific boundary creation should be incorporated into boundary theory and further investigated with other outcomes in the future. Finally, this study focused on the psychological aspect of work-nonwork interference which had not received much attention in the work-family interface literature. The results supported the notion that permeable boundaries are conducive to psychological work-nonwork interference. The next step for future research is to examine whether internal work-nonwork interference is associated with other important employee well-being outcomes such as job and life satisfaction. There is already some accumulated knowledge about psychological detachment from work (low internal work-to-nonwork interference) and its positive effect on recovery from work stress (e.g., Sonnentag & Bayer, 2005). Future research may want to explore the distinctive effect of internal nonwork-to-work interference on the outcomes in the work domain (e.g., positive affect at work, fatigue at work, task performance).

In terms of practical implications, this study suggests that organizations may want to develop policies or programs that can accommodate individual employee's segmentation preference to manage their work and nonwork lives. For example, organizations may want to consider whether their work-family balance programs are congruent with employees' preference for segmentation (e.g., flextime) or integration (e.g., on-site day care) rather than implementing programs indiscriminately (e.g., Rothbard, Phillips, & Dumas, 2005). When it comes to using CIT at home and at work, a supervisor may create one's own rule of refraining from contacting subordinates via e-mail or cellular phones for work-related issues after regular work hours or on weekends unless they are urgent. Likewise, individual employees also may want to apply restrictions on CIT uses for work matters at home or/and nonwork matters at work if they want to fully engage in their focal domains.

Limitations

As with any study, the results of the present study should be interpreted in light of the following limitations. First, because the respondents were invited to the online survey via e-mail, the response rate was low raising concerns about nonresponse bias. However, this low response rate is not even accurate because it was impossible to verify whether all of the e-mail addresses were actively used accounts or not as individuals can hold multiple e-mail accounts these days. Schalm and Kelloway (2001) investigated the correlation between nonresponse rate of a survey and reported effect size in occupational health psychology research. Their test showed that there was no significant correlation between response rate and effect size, suggesting that nonresponse is not likely to result in substantial bias in the survey study result. Nevertheless, it would be better for future research if organizational commitment is obtained for data collection to raise a response rate. Second, the current sample is predominantly White limiting the generalizability of the findings to other populations with different racial backgrounds. Third, the common method bias cannot be ruled out as the study variables were all self-reported (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003; Spector, 1987). However, most of the variables were inherently individuals' perceptions (internal work-nonwork interference, segmentation preference, role identification) so it would be difficult to use other methods to measure them. In future research, it would be desirable to separate measurement points for independent variables and dependent variables or to receive significant others' ratings in order to reduce common method variance problem (Podsakoff et al., 2003). Fourth, measuring work group norm at an individual level is a limitation of this study, and this might have been why interaction effects were not present. Future research may want to replicate this study with multi-level design where work group norm is to be aggregated at a group level capturing meaningful work group norm. Finally, this study was

cross-sectionally designed; hence interpreting the specific direction of the effects should be cautious. For instance, do employees with stronger segmentation preference create more boundaries around CIT use, or are individuals with more boundaries on CIT use likely to develop an increased preference for segmentation? Despite the limitations, the current findings will hopefully stimulate future investigation in employee boundary management and its effect on various work and nonwork outcomes given that managing work-nonwork life is one of the primary challenges for most of the working population with increasingly blurred boundaries.

References

- Aguinas, H. (2004). *Moderated regression*. New York: Guilford.
- Ashforth, B. E., Kreiner, G. E., & Fugate, M. (2000). All in a day's work: Boundaries and micro role transitions. *Academy of Management Review*, 25(3), 472-491.
- Bellavia, G. M., & Frone, R. M. (2005). Work-Family Conflict. In J. Barling, E.K. Kelloway, & M. R. Frone (Eds.), *Handbook of Work Stress* (pp.113-147). Thousand Oaks: Sage Publication.
- Boswell, W. R., & Olson-Buchanan, J. B. (2007). The use of communication technologies after hours: The role of work attitudes and work-life conflict. *Journal of Management*, 33(4), 592-610.
- Byron, K. (2005) A meta-analytic review of work-family conflict and its antecedents. *Journal of Vocational Behavior*, 67, 169-198.
- Cardenas, R. A., Major, D. A., & Bernas, K. H. (2004). Exploring work and family distraction: Antecedents and outcomes. *International Journal of Stress Management*, 11(4), 346-365.
- Carlson, D. S., & Frone, M. R. (2003). Relation of behavioral and psychological involvement to a new four-factor conceptualization of work-family interference. *Journal of Business and Psychology*, 17(4), 515-535.
- Chesley, N., Moen, P., & Shore, R. P. (2003). The new technology climate. In P. Moen (Ed.), *It's about time: Couples and careers* (pp. 220-241). Ithaca and London, Cornell University Press.
- Chesley, N. (2005). Blurring boundaries? Linking technology use, spillover, individual distress, and family satisfaction. *Journal of Marriage and Family*, 67, 1237-1248.

- Cialdini, R. B., & Trost, M. R. (1998). Social influence: Social norms, conformity and compliance. In D. T. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *The handbook of social psychology* (4th ed., Vol. 2, pp. 151-192). New York: McGraw-Hill.
- Clark, S. C. (2000). Work/family border theory: A new theory of work/family balance. *Human Relations*, 53(6), 747-770.
- Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences* (3rd ed.). Mahwah: Lawrence Erlbaum Associates, Publishers.
- DeCoster, J. (2007). Applied Linear Regression Notes set 1. Retrieved on March, 15, 2009 from <http://www.stat-help.com/notes.html>.
- Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention and behavior: An introduction to theory and research*. Readings, MA: Addison-Wesley.
- Frone, M. R., Russell, M., & Cooper, M. L. (1992). Prevalence of work-family conflict: Are work and family boundaries asymmetrically permeable? *Journal of Organizational Behavior*, 13, 723-729.
- Gambles, R., Lewis, S., & Rapoport, R. (2006). *The Myth of Work-Life Balance: The challenge of our time for men, women, and societies*. West Sussex, England: John Wiley & Sons.
- Golden, A. G., & Geisler, C. (2007). Work-life boundary management and the personal digital assistant. *Human Relations*, 60(3), 519-551.
- Gosling, S. D., Vazire, S., Srivastava, S., John, O. P. (2004). Should we trust Web-based studies? A comparative analysis of six preconceptions about Internet questionnaires. *American Psychologist*, 59, 93-104.

- Kalleberg, A. L., & Epstein, C. F. (2001). Temporal dimensions of employment relations. *American Behavioral Scientist*, 44, 1064-1075.
- Kraut, R., Olson, J., Mahzarin, B., Bruckman, A., Cohen, J., & Couper, M. (2004). Psychological research online: Report of Board of Scientific Affairs' Advisory Group on the conduct of research on the Internet. *American Psychologist*, 59, 105-117.
- Kreiner, G. E. (2006). Consequences of work-home segmentation or integration: a person-environment fit perspective. *Journal of Organizational Behavior*, 27(4), 485-507.
- Kossek, E. E., Lautsch, B. A., & Eaton, S. C. (2005). Flexibility enactment theory: Relationships between type, boundaries, control and work-family effectiveness. In E. E. Kossek & S. J. Lambert (Eds.), *Work and Life Integration: Organizational, Cultural and Individual Perspectives* (pp.243-261). Mahwah, N.J.: Lawrence Erlbaum Associates Press.
- Lambert, S. J., & Waxman, E. (2005). Organizational stratification: Distributing opportunities for balancing work and personal life. In E. E. Kossek & S. J. Lambert (Eds.), *Work and Life Integration: Organizational, Cultural and Individual Perspectives* (pp. 103-126). Mahwah, N.J.: Lawrence Erlbaum Associates Press.
- Middleton, C. A. (2007). Illusions of balance and control in an always-on environment: a case study of BlackBerry users. *Continuum: Journal of Media & Cultural Studies*, 21(2), 165-178.
- Major, D. A., & Germano, L. M. (2006). The changing nature of work and its impact on the work-home interface. In F. Jones, R. J. Burke, & M. Westman (Eds.), *Work-life balance: A psychological perspective* (pp.13-38). New York, Psychology Press.

- Methot, J. R., & LePine, J. A. (2009). *Too close for comfort: Effect of role segmentation preferences in proactive decisions regarding the boundary between work and nonwork domains*. Paper presented at the 24th Annual Conference of the Society of Industrial and Organizational Psychology, New Orleans, GA.
- Milliken, F. J., & Dunn-Jensen, L. M. (2005). The changing time demands of managerial and professional work: Implications for managing the work-life boundary. In E. E. Kossek & S. J. Lambert (Eds.), *Work and Life Integration: Organizational, Cultural and Individual Perspectives* (pp.43-60). Mahwah, N.J.: Lawrence Erlbaum Associates Press.
- Nippert-Eng, C. E. (1996). *Home and work: Negotiating Boundaries through Everyday Life*. Chicago, I.L.: University of Chicago Press.
- Olson-Buchanan, J. B., & Boswell, W. R. (2006). Blurring boundaries: Correlates of integration and segmentation between work and nonwork. *Journal of Vocational Behavior*, 68, 432-445.
- Paolo, A. M., Bonaminio, G. A., Gibson, C., Partridge, T., & Kallail, K. (2000). Response rate comparisons of E-mail- and mail-distributed student evaluations. *Teaching and Learning in Medicine*, 12, 81-84.
- Pleck, J. H., (1977). The work family role system. *Social Problems*, 24, 417-427.
- Rothbard, N. P., Phillips, K. W., & Dumas, T. L. (2005). Managing multiple roles: Work-family policies and individuals' desires for segmentation. *Organization Science*, 16(3), 243-258.
- Schalm, R. L., & Kelloway, E. K. (2001). The relationship between response rate and effect size in occupational health psychology research. *Journal of Occupational Health Psychology*, 6 (2), 160-163.

- Sonnentage, S., & Bayer, U.-V. (2005). Switching off mentally: Predictors and consequences of psychological detachment from work during off-job time. *Journal of Occupational Health Psychology, 10*(4), 393-414.
- Spector, P. E. (1987). Method variance as an artifact in self-reported affect and perceptions at work: Myth or significant problem? *Journal of Applied Psychology, 72*(3), 438-443.
- Spector, P. E., & Fox, S. (2003). Reducing subjectivity in the assessment of the job environment: Development of the factual autonomy scale, FAS. *Journal of Organizational Behavior, 24*, 417-432.
- Stryker, S. (1980). Identity salience and role performance: The importance of symbolic interaction theory for family research. *Journal of Marriage and the Family, 30*, 558-564.
- Towers, I., Duxbury, L., Higgins, C., & Thomas, J. (2006). Time thieves and space invaders: technology, work and the organization. *Journal of Organizational Change Management, 19*(5), 593-618.
- Valcour, P. M., & Hunter, L. W. (2005). Technology, organizations, and work-life integration. In E. E. Kossek & S. J. Lambert (Eds.), *Work and Life Integration: Organizational, Cultural and Individual Perspectives* (pp.61-84). Mahwah, N.J.: Lawrence Erlbaum Associates Press.

Table 1. Availability and use of Communication/Information Technology (CIT)

CITs	At home for work purpose	At work for non-work roles	NA at home	NA at work
E-mails/The Internet	47.90%	32.40%	0.8% (2)	0.4% (1)
Cell phones	31.40%	24.20%	4.2% (11)	2.9% (5)
Phones	4.90%	12.90%	11.3% (30)	0.4% (1)
Computers/Laptops	45.30%	35.10%	1.1% (3)	1.1%(3)
PDAs	22.20%	7.60%	52.7% (138)	56.6%(150)
Voice Mails	17.40%	10.50%	6.8% (18)	7.2% (19)

Note: $n = 265$; NA = Not available; Frequencies are indicated in parenthesis; percentage indicates the combined responses of *I use it often* and *I use it very often*.

Table 2. Descriptive statistics for study variables

	<i>α</i>	<i>M</i>	<i>SD</i>	<i>Observed Range</i>	<i>Possible Range</i>	<i>Skewness</i>
1 Age	—	46	8.74	24-64	—	-0.63
2 Autonomy	.79	1.73	0.54	1.00-3.40	1.00-5.00	0.62
3 Nonwork role identification	.82	4.07	0.59	1.75-5.00	1.00-5.00	-0.58
4 Work role identification	.85	2.70	0.62	1.10-4.50	1.00-5.00	0.08
5 Preference for segmenting work from nonwork	.94	5.13	1.45	1.00-7.00	1.00-7.00	-0.77
6 Preference for segmenting nonwork from work	.90	4.47	1.30	1.00-7.00	1.00-7.00	-0.42
7 Group norm on segmenting work from nonwork	.85	3.60	1.17	1.00-7.00	1.00-7.00	0.09
8 Group norm on segmenting nonwork from work	.82	3.37	1.04	1.00-6.40	1.00-7.00	0.14
9 Boundary creation around CIT at home	.81	2.30	0.68	1.00-5.00	1.00-5.00	0.45
10 Boundary creation around CIT at work	.85	2.38	0.79	1.00-4.57	1.00-5.00	0.68
11 Internal work-to-nonwork interference	.86	3.28	0.80	1.00-5.00	1.00-5.00	-0.03
12 Internal nonwork-to-work interference	.81	3.11	0.64	1.00-5.00	1.00-5.00	0.24

Note: $n = 265$.

Table 3. Intercorrelations among Study Variables ($n = 265$)

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Age															
2. Sex ^a	-.33**														
3. Race ^b	.07	-.06													
4. Marital status ^c	-.07	.11	-.03												
5. Number of children	-.28**	-.06	.07	-.19**											
6. Job autonomy	-.26	.16**	-.06	.09	-.01										
7. Nonwork role identification	-.08	.10	.03	-.28**	.27**	-.09									
8. Work role identification	.11	-.05	.12*	.02	-.11	-.17**	-.22**								
9. Preference for segmenting work from nonwork	-.16*	.13*	-.13*	-.02	.01	.23**	.08	-.44**							
10. Preference for segmenting nonwork from work	.08	-.16*	-.09	.06	-.15*	.07	-.22**	.11	.27**						
11. Group norm on segmenting work from nonwork	.03	-.05	-.05	-.06	.05	.04	.11	-.11	.16**	.03					
12. Group norm on segmenting nonwork from work	-.08	-.12	-.06	-.08	.00	.00	-.14*	.01	.14*	.32**	.06				
13. Boundary creation around CIT use at home	-.11	.17*	-.17**	.03	.00	.15*	.12*	-.29**	.42**	.02	.20**	.07			
14. Boundary creation around CIT use at work	.07	.13*	-.08	.00	-.11	.09	-.01	.15*	.01	.24**	.11	.12*	.19*		
15. Internal WNI	-.03	-.02	-.01	-.01	-.01	-.01	-.06	.43**	-.31**	.09	-.40**	-.03	-.51**	.00	
16. Internal NWI	-.17**	.11	-.05	-.05	.17**	.14*	.21**	-.22**	.00	-.34**	-.05	-.12*	-.05	-.35**	.04

* $p < 0.05$; ** $p < 0.01$ (2-tailed).

Note. ^a coded 1 = Male, 0 = Female; ^b coded 1 = White, 0 = Nonwhite; ^c coded 1 = Married, 2 = Single, 3 = Separated or divorced, 4 = Cohabited, 5 = Widowed; WNI = work-to-nonwork interference; NWI = nonwork-to-work interference.

Table 4. Hierarchical Regression Analysis for Boundary Creation of CIT use at Home
Predicted by Work Role Identification and Preference for Segmenting Work from Nonwork

Variable	Outcome: Boundary Creation of CIT use at Home			
	Step 1 β_1	Step 2 β_2	Final β_3	ΔR^2
1. Sex ^a	.15*	.12*	.13*	.07**
Race ^b	-.16**	-.10	-.09	
Marital status ^c	-.03	-.01	-.01	
Number of children	.02	-.01	.00	
Job autonomy	.12*	.03	.04	
2. Work role identification		-.12*	-.11	.17***
Preference for segmenting work from nonwork		.31**	.34**	
Group norm on segmenting work from nonwork		.14*	.13*	
3. Work role identification x Preference			-.12*	.02
Work role identification x Group norm			-.02	
Preference x Group norm			.03	
Model summary:		Adjusted $R^2 = .22^{**}$		

Note: $n = 265$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$; ^a coded 1 = Male, 0 = Female; ^b coded 1 = White, 0 = Nonwhite; ^c coded 1 = Married, 2 = Single, 3 = Separated or divorced, 4 = Cohabited, 5 = Widowed.

Table 5. Hierarchical Regression Analysis for Boundary Creation of CIT use at Work
Predicted by Nonwork Role Identification and Preference for Segmenting Nonwork from Work

Outcome:		Boundary Creation of CIT use at Work			
Variable		Step 1 β_1	Step 2 β_2	Final β_3	ΔR^2
1. Sex ^a		.11	.16*	.15*	.04*
Race ^b		-.06	-.04	-.04	
Marital status ^c		-.01	.00	.00	
Number of children		-.10	-.07	-.08	
Job autonomy		.06	.05	.05	
2. Nonwork role identification			.06	.06	.07***
Preference for segmenting nonwork from work			.24**	.22**	
Group norm on segmenting nonwork from work			.07	.06	
3. Nonwork role identification x Preference				-.08	.01
Nonwork role identification x Group norm				.02	
Preference x Group norm				-.09	
Model summary:		Adjusted $R^2 = .07^{**}$			

Note: $n = 265$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$; ^a coded 1 = Male, 0 = Female; ^b coded 1 = White, 0 = Nonwhite; ^c coded 1 = Married, 2 = Single, 3 = Separated or divorced, 4 = Cohabited, 5 = Widowed.

Table 6. Hierarchical Regression Analysis for Internal Work-to-Nonwork Interference Predicted by Boundary Creation of CIT use at Home

Outcome: Variable	Internal Work-to-Nonwork Interference		
	Step 1 β_1	Step 2 β_2	ΔR^2
1. Sex ^a	.00	.07	.06*
Race ^b	.24**	.16**	
Marital status ^c	-.01	-.02	
Number of children	-.03	-.02	
Job autonomy	.00	.06	
2. Boundary creation of CIT use at home		-.50***	.24***
Model summary:		Adjusted $R^2 = .28***$	

Note: $n = 265$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$; ^a coded 1 = Male, 0 = Female; ^b coded 1 = White, 0 = Nonwhite; ^c coded 1 = Married, 2 = Single, 3 = Separated or divorced, 4 = Cohabited, 5 = Widowed.

Table 7. Hierarchical Regression Analysis for Internal Nonwork-to-Work Interference Predicted by Boundary Creation of CIT use at Work

Outcome: Variable	Internal Nonwork-to-Work Interference		
	Step 1 β_1	Step 2 β_2	ΔR^2
1. Sex ^a	.11	.15*	.06**
Race ^b	-.02	-.04	
Marital status ^c	-.05	-.05	
Number of children	.17**	.13*	
Job autonomy	.13*	.15**	
2. Boundary creation of CIT use at work		-.37***	.13***
Model summary:		Adjusted $R^2 = .17***$	

Note: $n = 265$; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$; ^a coded 1 = Male, 0 = Female; ^b coded 1 = White, 0 = Nonwhite; ^c coded 1 = Married, 2 = Single, 3 = Separated or divorced, 4 = Cohabited, 5 = Widowed.

Figure 1.

A Hypothesized Model for the Home Domain

Figure 2.

A Hypothesized Model for the Work Domain

APPENDIX A. RECRUITMENT E-MAIL TEXT FOR THE GRADUATES FROM COLLEGE
OF BUSINESS AT BGSU

Department of Psychology
Bowling Green, Ohio 43403-0228
Tel: (419) 372-2301
Fax: (419) 372-6013

Dear Prospective Participants:

You are receiving this e-mail message because you are a graduate from the College of Business at Bowling Green State University (BGSU). Researchers at BGSU are conducting a research study on employees' work-nonwork boundary management using communication/information technology (e.g., e-mail, cell phones, etc.). Our aim is to help organizations develop better policies and provide workers with optimal strategies for balancing their work and nonwork lives.

This message requests your participation in the online survey, which will take about 15 to 20 minutes. You can simply complete the survey by clicking URL below after reading the remainder of this e-mail.

You will be entered into a random drawing for eight electronic gift certificates (Amazon.com), each worth \$50, in return for your submission of a completed survey. Please answer the online survey by February 15, 2009.

If you would like to obtain any information about this research, you may contact YoungAh Park (ypark@bgsu.edu) or Dr. Steve Jex (sjex@bgsu.edu) in the Psychology Department at Bowling Green State University in Ohio. Your participation in this research is voluntary. The researchers have pledged to protect your privacy by keeping your responses strictly confidential. We will be asking for your name and e-mail address at the end of the survey in case you need to be contacted for the gift certificate drawing. No one will be able to access your individual responses except the BGSU research team. All data will be stored in a password-protected file on a computer in a locked office.

We really appreciate your willingness to help with this valuable research!

Cordially,

Youngah Park, Doctoral Student
Department of Psychology
(419) 372.4305
ypark@bgsu.edu

Steve M. Jex, Ph D.
Psychology Professor
(419) 372.2301
sjex@bgsu.edu

Survey Link:

<http://www.surveymonkey.com/s.aspx?sm= 2fwW 2bBumGhrPIAMDIIXho6w 3d 3d>

BGSU HSRB - APPROVED FOR USE
ID# H09T050GX2
EFFECTIVE OCT. 10, 2008
EXPIRES OCT. 5, 2009

APPENDIX B. RECRUITMENT E-MAIL TEXT FOR THE GRADUATES FROM MBA
PROGRAM AT BGSU

Department of Psychology
Bowling Green, Ohio 43403-0228
Tel: (419) 372-2301
Fax: (419) 372-6013

Dear Prospective Participants:

You are receiving this e-mail message because you are a graduate from MBA program at Bowling Green State University (BGSU). Researchers at BGSU are conducting a research study on employees' work-nonwork boundary management using communication/information technology (e.g., e-mail, cell phones, etc.). Our aim is to help organizations develop better policies and provide workers with optimal strategies for balancing their work and nonwork lives.

This message requests your participation in the online survey, which will take about 15 to 20 minutes. You can simply complete the survey by clicking URL below after reading the remainder of this e-mail.

You will be entered into a random drawing for eight electronic gift certificates (Amazon.com), each worth \$50, in return for your submission of a completed survey. Please answer the online survey by February 15, 2009.

If you would like to obtain any information about this research, you may contact YoungAh Park (ypark@bgsu.edu) or Dr. Steve Jex (sjex@bgsu.edu) in the Psychology Department at Bowling Green State University in Ohio. Your participation in this research is voluntary. The researchers have pledged to protect your privacy by keeping your responses strictly confidential. We will be asking for your name and e-mail address at the end of the survey in case you need to be contacted for the gift certificate drawing. No one will be able to access your individual responses except the BGSU research team. All data will be stored in a password-protected file on a computer in a locked office.

We really appreciate your willingness to help with this valuable research!

Cordially,

Youngah Park, Doctoral Student
Department of Psychology
(419) 372.4305
ypark@bgsu.edu

Steve M. Jex, Ph D.
Psychology Professor
(419) 372.2301
sjex@bgsu.edu

Survey Link:

http://www.surveymonkey.com/s.aspx?sm=s3DpG3uFVD05WESTO_2fQOBA_3d_3d

**BGSU HSRB - APPROVED FOR USE
ID# H09T050GX2
EFFECTIVE OCT. 10, 2008
EXPIRES OCT. 5, 2009**

APPENDIX C. SURVEY

Informed consent

Dear Prospective Participants:

You have been invited to this online survey study regarding employees' work and nonwork management using communication/information technology. This study is being conducted by researchers from Bowling Green State University (BGSU). Our aim is to help organizations develop better policies and provide workers with optimal strategies for balancing their work and nonwork lives. Your participation in this survey can help BGSU researchers by answering questions about your experience in managing work and nonwork life.

Researchers from BGSU will collect and summarize the results of this survey. Results will be summarized for all participants and may also be broken down by age, sex, occupations, and industries. The researchers have pledged to protect your privacy by keeping your responses strictly confidential. We will be asking for your name and e-mail address at the end of the survey in case you need to be contacted for the gift certificate drawing. No one will be able to access your individual responses except the BGSU research team. All data will be stored in a password-protected file on a computer in a locked office.

Your participation in this survey is voluntary. You may skip any items you do not wish to answer. Your decision to participate, or not participate, will have no effect on your employment. The risks associated with participation in this study are no greater than those you would experience in your daily life. Please remember to clear your computer's browser cache and page history following submission of the completed survey in order to further protect your privacy, especially if you are completing the survey on a public computer. Please also note that some employers use software that tracks web sites visited and keystrokes made, so you may wish to complete the survey on a public or home computer.

We know that your time is valuable, and we hope that you will take the time (an estimated 15-20 minutes) to complete the survey. Please complete the survey by February 15, 2009. Please note that completion and submission of the survey implies your consent to participate.

If you have any questions about this research you may contact Youngah Park in the Department of Psychology at Bowling Green State University at 419.575.7621 or e-mail (ypark@bgsu.edu) or you may contact Dr. Steve M. Jex of the Department of Psychology at Bowling Green State University at 419.372.2301 or e-mail (sjex@bgsu.edu). If you have any questions about the conduct of this study or your rights as a research participant, you may contact the Chair of Bowling Green State University's Human Subjects Review Board, at 419.372.7716 (hsrb@bgnet.bgsu.edu).

Thank you again for your participation. We appreciate your willingness to help with this research!

Cordially,

Youngah Park, Doctoral Student
Department of Psychology
(419) 372.4305 ypark@bgsu.edu

Dr. Steve M. Jex, Psychology Professor
Department of Psychology
(419) 372.2301 sjex@bgsu.edu

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ID# H09T050GX2
EFFECTIVE OCT. 10, 2008
EXPIRES OCT. 5, 2009

In the Work Domain

1. The following statements are about your preference for segmenting nonwork (family or personal) life from your work domain. Please indicate your agreement to each statement based on the rating scale.

Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
1	2	3	4	5	6	7

1. I don't like to have to think about work while I'm at home.

1 2 3 4 5 6 7

2. I prefer to keep work life at work.

1 2 3 4 5 6 7

3. I don't like work issues creeping into my home life.

1 2 3 4 5 6 7

4. I like to be able to leave work behind when I go home.

1 2 3 4 5 6 7

2. Please rate the extent to which you agree with the following statements.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

1. The most important things that happen to me involve my job/profession.

1 2 3 4 5

2. I am very much involved personally in my job.

1 2 3 4 5

3. I live, eat and breathe my job.

1 2 3 4 5

4. Most of my interests are centered around my job.

1 2 3 4 5

5. I have very strong ties with my present job which would be very difficult to break.

1 2 3 4 5

6. I consider my job to be very central to my existence.

1 2 3 4 5

7. I like to be absorbed in my job most of the time.

1 2 3 4 5

8. To me, my job is only a small part of who I am.

1 2 3 4 5

9. Usually I feel detached from my job.

1 2 3 4 5

10. Most of my personal life goals are job-oriented.

1 2 3 4 5

3. Please rate the extent to which you agree with the following statements that describe people in your workplace.

Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
1	2	3	4	5	6	7

1. The people I work with keep family/personal matters at home.
1 2 3 4 5 6 7
2. The people I work with prevent family/personal issues from creeping into workplace.
1 2 3 4 5 6 7
3. The people I work with are discouraged from accommodating family/non-work roles at work.
1 2 3 4 5 6 7
4. The people I work with mentally leave family/personal issues behind when they are at work.
1 2 3 4 5 6 7
5. The people I work with are expected not to bring family/personal matters to work.
1 2 3 4 5 6 7

4. Please indicate how often you experience the following specific situations when you are AT WORK.

Never/Almost Never	Rarely	Sometimes	Often	Very Often
1	2	3	4	5

1. When you are at home, how often do you think about work-related problems?
1 2 3 4 5
2. When you are at home, how often do you think about things you need to accomplish at work?
1 2 3 4 5
3. When you are at home, how often do you try to arrange, schedule, or perform job-related activities outside of your normal work hours?
1 2 3 4 5

5. Please rate the extent to which you agree with the following statements that describe your self-imposed restrictions on using communication/information technology (CIT) to manage personal/family matters AT WORK.

Examples of CIT include the Internet, computers, laptops, phones, pagers, cell phones, PDAs, e-mails, etc.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

1. I discourage my family, friends, or romantic partner to contact me while I'm at work through cellular phone, e-mail, pagers, etc.
1 2 3 4 5
2. I limit the amount of time or when I use information/communication technologies for personal/family purposes during regular work hours (e.g., only during lunch break).
1 2 3 4 5
3. I do not use information/communication technologies to accommodate personal/family role(s) while at work.
1 2 3 4 5
4. I restrict the use of computers, phones, pagers, etc. exclusively to work communications while I'm at work.
1 2 3 4 5

5. I do not receive phone calls (including cellular phones) from people outside of work while I'm at work (e.g. family, friends, and romantic partner).

1 2 3 4 5

6. I will only respond to family-related phone calls, pagers, etc. during regular work hours if it is an emergency.

1 2 3 4 5

6. How often do you actually use the following technologies to do non-work roles in your family/personal life (e.g., as a spouse, parent, friend, partner, etc.) during regular work hours.

Not Available	Never/Almost Never	Rarely	Sometimes	Often	Very Often
0	1	2	3	4	5

1. E-mail/The Internet

0 1 2 3 4 5

2. Cellular phones

0 1 2 3 4 5

3. Office phones

0 1 2 3 4 5

4. Computers/Laptops

0 1 2 3 4 5

5. PDAs

0 1 2 3 4 5

6. Pagers

0 1 2 3 4 5

7. Voice mail

0 1 2 3 4 5

7. In your present job, how often do you ask permission...?

Almost Never	Rarely	Sometimes	Quite Often	Extremely Often
1	2	3	4	5

... to take a rest break?

1 2 3 4 5

... to take a lunch/meal break?

1 2 3 4 5

... to leave early for the day?

1 2 3 4 5

... to change the hours you work?

1 2 3 4 5

... to leave your office or work station?

1 2 3 4 5

... to come late to work?

1 2 3 4 5

... to take time off?

1 2 3 4 5

8. How often do the following events occur in your present job?

Almost Never	Once or Twice	Once or Twice per month	Once or Twice per week	Every day
1	2	3	4	5

How often does someone tell you what you are to do?

1 2 3 4 5

How often does someone tell you when you are to do your work?

1 2 3 4 5

How often does someone tell you how you are to do your work?

1 2 3 4 5

In the Home Domain

1. The following statements are about your preference for segmenting work from your home domain. Please indicate your agreement to each statement based on the rating scale.

Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
1	2	3	4	5	6	7

1. I don't like to have to think about work while I'm at home.

1 2 3 4 5 6 7

2. I prefer to keep work life at work.

1 2 3 4 5 6 7

3. I don't like work issues creeping into my home life.

1 2 3 4 5 6 7

4. I like to be able to leave work behind when I go home.

1 2 3 4 5 6 7

2. Please rate the extent to which you agree with the following statements.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

1. I would be a less fulfilled person without my role(s) in my personal/family life.

1 2 3 4 5

2. I enjoy talking about my personal/family life with other people.

1 2 3 4 5

3. A great satisfaction in my life comes from my role(s) in my personal/family life.

1 2 3 4 5

4. I am very much involved in personally with my family members' lives.

1 2 3 4 5

5. The most important things that happen to me are related to my personal/family roles.

1 2 3 4 5

6. For me, days at home really fly by.

1 2 3 4 5

7. Quite often I plan ahead the next day's personal/family activities.

- 1 2 3 4 5
8. Nothing is as important as personal/family roles.
- 1 2 3 4 5

3. Please rate the extent to which you agree with the following statements that describe people in your workplace.

Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
1	2	3	4	5	6	7

1. The people I work with mentally leave work behind when they go home.
1 2 3 4 5 6 7
2. The people I work with keep work matters at work.
1 2 3 4 5 6 7
3. The people I work with prevent work issues from creeping into their home life.
1 2 3 4 5 6 7
4. The people I work with are expected to be available for work-related contacts outside of work.
1 2 3 4 5 6 7
5. The people I work with bring work home.
1 2 3 4 5 6 7

4. Please indicate how often you experience the following specific situations when you are AT HOME.

Never/Almost Never	Rarely	Sometimes	Often	Very Often
1	2	3	4	5

1. When you are at work, how often do you think about family-related/personal problems?
1 2 3 4 5
2. When you are at work, how often do you think about things you need to accomplish at home?
1 2 3 4 5
3. When you are at work, how often do you try to arrange, schedule, or perform family-related/personal activities?
1 2 3 4 5

5. Please rate the extent to which you agree with the following statements that describe your self-imposed restrictions on using communication/information technology (CIT) FOR WORK PURPOSES AT HOME.

Examples of CIT include the Internet, computers, laptops, phones, pagers, cell phones, PDAs, e-mails, etc.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

1. I limit the amount of time or when I use information/communication technologies during non-work hours (for example, only until 7pm).
1 2 3 4 5

2. I do not use information/communication technologies while on vacation for work purposes.
- 1 2 3 4 5
3. I do not use information/communication technologies during the weekends for work purposes.
- 1 2 3 4 5
4. I will only *respond* to emails, phone calls, pagers, etc. during non-work hours if it is an emergency.
- 1 2 3 4 5
5. I use information/communication technologies for *outgoing* purposes (e.g., email my subordinate, page my boss), but I will not *receive incoming* calls/emails/etc.
- 1 2 3 4 5
6. I use information/communication technologies for work purposes during non-work hours, but I deduct time spent from my time at work (i.e., comp time).
- 1 2 3 4 5
7. I redefine my work schedule (e.g., go in late, come home early) to make up for time spent using information/communication technologies for work purposes during non-work hours.
- 1 2 3 4 5

6. How often do you actually use the following technologies to perform your job AT HOME during non-work hours?

Not Available	Never/Almost Never	Rarely	Sometimes	Often	Very Often
0	1	2	3	4	5

1. E-mail/The Internet
- 0 1 2 3 4 5
2. Cellular phones
- 0 1 2 3 4 5
3. Office phones
- 0 1 2 3 4 5
4. Computers/Laptops
- 0 1 2 3 4 5
5. PDAs
- 0 1 2 3 4 5
6. Pagers
- 0 1 2 3 4 5
7. Voice mail
- 0 1 2 3 4 5

7. Please rate the extent to which you agree with following statements about you.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

1. The most important things that happen to me involve my family.
- 1 2 3 4 5
2. I am very much involved personally in my family.
- 1 2 3 4 5
3. I live, eat and breathe my family.
- 1 2 3 4 5
4. Most of my interests are centered around my family.

1	2	3	4	5
5. I have very strong ties with my family which would be very difficult to break.				
1	2	3	4	5
6. I consider my family to be very central to my existence.				
1	2	3	4	5
7. I like to be absorbed in my family most of the time.				
1	2	3	4	5
8. To me, my family is only a small part of who I am.				
1	2	3	4	5
9. Usually I feel detached from my family.				
1	2	3	4	5
10. Most of my personal life goals are family-oriented.				
1	2	3	4	5

8. Please indicate your agreement to the following statements about yourself when you are AT HOME.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
1. I forget about work.				
1	2	3	4	5
2. I don't think about work at all.				
1	2	3	4	5
3. I distance myself from my work.				
1	2	3	4	5
4. I get a break from the demands of work.				
1	2	3	4	5

Well-being / Demographics

1. Below are five statements with which you may agree or disagree. Please indicate your agreement.

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5
1. In most ways my life is close to my ideal.				
1	2	3	4	5
2. The conditions of my life are excellent.				
1	2	3	4	5
3. I am satisfied with my life.				
1	2	3	4	5
4. So far I have gotten the important things I want in my life.				
1	2	3	4	5
5. If I could live my life over, I would change almost nothing.				
1	2	3	4	5

2. During the past 30 days did you have any of the following symptoms? If you did have the symptom, did you see a doctor about it?

No	Yes, but I didn't see doctor	Yes, and I saw doctor
----	------------------------------	-----------------------

1	2	3
---	---	---

1. An upset stomach or nausea ()
2. A backache ()
3. Trouble sleeping ()
4. A skin rash ()
5. Shortness of breath ()
6. Chest pain ()
7. Headache ()
8. Fever ()
9. Acid indigestion or heartburn ()
10. Eye strain ()
11. Diarrhea ()
12. Stomach cramps (Not menstrual) ()
13. Constipation ()
14. Heart pounding when not exercising ()
15. An infection ()
16. Loss of appetite ()
17. Dizziness ()
18. Tiredness or fatigue ()

3. Please indicate whether or not you have experienced each of the following situations over the last 4-6 weeks. Circle the number which best reflects your experience during this period using the scale below.

Have you recently ...?

	Not at all	Sometimes	Often	Very Often
1. Been able to concentrate on what you were doing?	1	2	3	4
2. Lost much sleep over worry?	1	2	3	4
3. Felt you are playing a useful part in things?	1	2	3	4
4. Felt capable about making decisions about things?	1	2	3	4
5. Felt constantly under strain?	1	2	3	4
6. Felt you couldn't overcome your difficulties?	1	2	3	4
7. Been able to enjoy your normal day-to-day activities?	1	2	3	4
8. Been able to face up to your problems?	1	2	3	4
9. Been feeling unhappy or depressed?	1	2	3	4
10. Been losing confidence in yourself?	1	2	3	4
11. Been thinking of yourself as a worthless person?	1	2	3	4
12. Been feeling reasonably happy, all things considered.	1	2	3	4

4. Please indicate your agreement to how you felt during the last 2 weeks by answering each statement.

Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
1	2	3	4	5	6	7

1. I feel tired.

1 2 3 4 5 6 7

2. Physically I feel exhausted.

1 2 3 4 5 6 7

3. I feel weak.

1 2 3 4 5 6 7

4. I feel fit.

1 2 3 4 5 6 7

5. I feel rested.

1 2 3 4 5 6 7

6. I feel very active.

1 2 3 4 5 6 7

7. I am tired very quickly.

1 2 3 4 5 6 7

5. Please indicate how much it has recently been difficult for you to....

Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
1	2	3	4	5	6	7

1. sleep through the night.

1 2 3 4 5 6 7

2. fall a sleep.

1 2 3 4 5 6 7

3. wake up early.

1 2 3 4 5 6 7

4. wake up easily.

1 2 3 4 5 6 7

5. sleep well.

1 2 3 4 5 6 7

6. sleep calm.

1 2 3 4 5 6 7

Your Age _____

Gender Male() Female()

Marital Status

Married() Single() Separated or Divorced() Cohabited() Widowed()

Race

White() African American() Hispanic() Asian() Others()

How many children do you have (under 18 years old and live with you)?

If you have a spouse or a romantic partner living with you, please answer the question. Is your spouse/partner employed?

() Yes, full-time employed

() Yes, part-time employed

() No, not employed

Please indicate your employment

() Full-time employed

() Part-time employed

() Self-employed

() Not employed/Retired

Do you work in an office setting?

() Yes () No If no, please specify _____

Are you a virtual office worker/tele-commuter? (Do you work from home?)

() Yes () No

Your Occupation _____

Your Job Title _____

How long have you had this job?

Year _____ Months _____

Please indicate your household income. _____

Thank you!!

Note: This survey remained the same for both MBA and College of Business graduates except for the order of items and online web address.