Home Domain Social Support and the Telecommuting Experience :
A Boundary Theory Perspective

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Drawing from boundary theory, this study examined the influence of both spouse and family social support on telecommuting outcomes. The analyses, conducted with a sub-sample of telecommuters who had an employed spouse and a sub-sample of telecommuters who had at least one child living at home, revealed a pattern of generally positive outcomes resulting from higher levels of home domain social support for telecommuting. Results are discussed in relation to the activities of creating and maintaining boundaries within a telecommuting arrangement.

Avec comme base conceptuelle la théorie des frontières, la présente étude porte sur l'influence du support social du conjoint et de la famille sur l'expérience de télétravail. Les analyses, réalisées avec un sous-échantillon de télétravailleurs ayant un conjoint en situation d'emploi ainsi qu'un sous-échantillon de télétravailleurs avec au moins un enfant à domicile, suggèrent que l'appui du milieu familial améliore, de façon générale, l'expérience de télétravail. Les résultats font l'objet d'une discussion qui questionne les activités de création et de maintient des frontières en situation de télétravail.

Key Words: Telecommuting, Social Support, Boundary Theory, Work/Family, Virtual Workplaces

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Telecommuting commonly refers to the use of communications technology to transport work from the office to the home or remote work centers. It is estimated that more than 19.6 million people telecommute in the United States (Anonymous, 2000) and census data indicates that over one million Canadians worked from their home in 1996. The number of wage and salary workers who received pay for work at home nearly doubled between 1991 and 1997 in the United States, while in Canada nine percent of all paid workers worked at home in 1995, compared with only six percent in 1991. In the European Union, close to four million people were telecommuting in 1997, up from 1.5 million people in 1994 (EITO, 1998). Although the growth of telecommuting is noticeable in many parts of the world, its progression has been slow by some standards (Ruppel & Harrington, 1995). In a recent assessment, Pearlson and Saunders (2001) remarked that telecommuting "has never quite taken off" and that "the practice is growing, but not at the phenomenal rate that its much-promised benefits would suggest" (p. 117).

Summary reviews of the benefits and challenges of telecommuting are abundant (e.g., Alvi & McIntyre, 1993; Cascio, 2000; Gainey, Kelly, & Hill, 1999; Guimaraes & Dallow, 1999; Hartman, Stoner, & Arora, 1991; Kurland & Bailey, 1999; Venkatraman, Tanriverdi, & Stokke, 1999). Although telecommuting may result in social isolation and defy conventional supervisory models, several advantages are worthy of mention. The time and space flexibility offered by telecommuting is said to ease tensions, improve the quality of life, and help balance work and family role demands. By cutting down on the number of commutes from home to a central office, telecommuting is likely to reduce expenses and allow more time for other activities. People with disabilities should also benefit from this arrangement. In addition, companies that encourage telecommuting often notice improvements in job performance due to fewer

interruptions and a more efficient allocation of time and office space. Enhanced company image and employee attraction and retention are other frequently mentioned telecommuting benefits.

With so much to gain, it is somewhat surprising that the rate of adoption of telecommuting has been sluggish. Considering the enhanced technological feasibility of telecommuting, it seems clear that a number of factors are inhibiting its diffusion. For instance, organizations may be slowing the adoption of telecommuting by maintaining traditional supervision. Pearlson and Saunders (2001) argued that "the slowness of businesses in adopting telecommuting is due in part to the difficulties that managers face in addressing issues related to paradoxes inherent in the practice" (p.117). From a learning perspective, telecommuting could slow the pace of knowledge creation within firms (Raghuram, 1996). In addition, people with strong affiliation needs may feel uncomfortable in what is often a more isolated home environment. As a final point, organizational hesitations regarding the adoption of telecommuting may also result from reports of unsuccessful telecommuting initiatives (e.g., Costello, 1989; Gordon & Kelly, 1986; Olson & Primps, 1984; Shamir, 1992; Shamir & Salomon, 1985; Yap & Tng, 1990).

For telecommuting to live up to its full potential, organizations need to locate the keys to successful telecommuting. The telecommuting literature suggests that the conditions for telecommuting success can be found in both the organizational and home domains (Gordon & Kelly, 1986; Hartman, Stoner, & Arora, 1991; Shamir, 1992; Wright & Oldford, 1995).

Nevertheless, considering that telecommuting includes workers who regularly work at home for some portion of their workweek, it is somewhat surprising that past investigations have devoted little attention to the influence of the home domain on telecommuting outcomes. Drawing

mainly from boundary theory (Ashforth, Kreiner, & Fugate, 2000; Michaelsen & Johnson, 1997; Nippert-Eng, 1996a, 1996b; Zerubavel, 1991), we investigated the influence of home support from the spouse and other family members on telecommuting outcomes. With two subsamples of telecommuters, that is a sub-sample of telecommuters who had an employed spouse and a sub-sample of telecommuters who had at least one child living at home, we examined how different forms of social support from the home domain influence six telecommuting outcomes that address an array of quality of life and productivity issues.

Theoretical Background

This section applies boundary theory to elucidate the functions of social support from the home domain in the telecommuting experience. We first argue that the likelihood of role blurring is greater in telecommuting than in a "traditional" central office arrangement. We then suggest that boundary work is required to manage the interference inherent in telecommuting arrangements. Social support from the home domain is expected to facilitate boundary work and foster a more positive telecommuting experience.

Role Blurring

Role blurring occurs in the absence of clear cues and symbols about the appropriate identity to adopt (Ashforth, Kreiner, & Fugate, 2000). Accounts of unclear cues and symbols are prominent in the telecommuting literature (Armellino & Montandreau, 1995; Dixon & Webster, 1998; Duxbury, Higgins, & Neufeld, 1998; Grensing-Pophal, 1998; Hill, Miller, Weiner, & Colihan, 1998; Jones, 1997; Morris, 1997; Olson & Primps, 1984; Phillips, 1998). For instance, telecommuters often interrupt their work to accomplish domestic chores. Although such pauses may be relaxing at times, they may also foster role ambiguity. Some telecommuters are actually nostalgic of the days when they commuted from their traditional office to their home, a

commute that allowed them to shift from their professional roles into their personal roles (Christensen, 1989). Within a telecommuting arrangement, the work domain, which generally functions under the logic of competition and rationality, becomes meshed with the personal domain, which generally functions on the basis of cooperation and affection (Gordon, 1998). The challenge to telecommuters is then to be an employee, a spouse, and a caregiver, in short, to cope with the interdependencies between distinct cultures and expectations (Morf, 1989), without the usual temporal and spatial cues and symbols that curtail role blurring.

Additional insights into the issue of role blurring in a telecommuting context may be gained from theorizing about the dynamics of work-family conflict. Greenhaus and Beutell defined work-family conflict as "... a form of inter-role conflict in which the role pressures from the work and family domains are mutually noncompatible in some respect. That is, participation in the work (family) role is made more difficult by virtue of participation in the family (work) role" (1985: p. 77). Thus, the term "work-family" refers to roles within the work and family domains rather than to the domains themselves (Yang, Chen, Choi, & Zou, 2000).

Whether or not telecommuting makes participation in one role (i.e., employee) more difficult by virtue of participation in another role (i.e., spouse, mother or father) is not clear, however (Duxbury, Higgins, & Neufeld, 1998). The view that telecommuting can help employees balance work and family demands is widely held. The rational for this view is that telecommuting (a) provides work-time and work-location flexibility; (b) increases control over the pacing and scheduling of work; (c) decreases time in commuting, allowing more time for the family; (d) offers the flexibility to provide emergency care for children or better combine work hours with family schedules; and (e) increases satisfaction with child care. The view that telecommuting hinders efforts to balance work and family is also quite prominent. The practice

is often associated with role overload, workaholism, interference, and family conflict. In sum, a boundary theory assessment suggests that telecommuting provides flexibility, but may also foster role blurring between the work and private domains.

From a boundary theory perspective (Ashforth, Kreiner, & Fugate, 2000; Michaelsen & Johnson, 1997; Nippert-Eng, 1996a, 1996b; Zerubavel, 1991), the transition from a central office to telecommuting is likely to lead to more integrated roles, or blending (Clark, 2000), with low contrast in role identities and flexible, permeable role boundaries, as opposed to segmented roles. More integrated roles offer greater flexibility, but they also produce more interference from work to family and from family to work. In a "traditional" central office work arrangement, the boundaries between work and family are asymmetrically permeable, whereas work demands and responsibilities are more likely to interfere with home life than vice versa (Frone, Russell, & Cooper, 1991; Hall & Richter, 1988; Pleck, 1977; Wiley, 1987). In a telecommuting arrangement, however, the frequency of interference from family to work is likely to increase, resulting in more integrated symmetrically permeable role boundaries.

More integrated roles facilitate the process of crossing role boundaries, but they also foster role blurring, which may result in anxiety (Ashforth, Kreiner, & Fugate, 2000). Hence, both the positive (i.e., the flexibility effect) and negative (i.e., the interference effect) outcomes of telecommuting can be accounted for within the framework of boundary theory. For instance, by increasing work-time and -location flexibility, telecommuting facilitates the process of crossing role boundaries, which should lead to positive outcomes such as reductions in work-family conflict (i.e., the flexibility effect). However, by increasing interference, telecommuting fosters role blurring, which should lead to negative outcomes such as higher levels of work-family conflict (i.e., the interference effect). Consequently, a seemingly effective strategy to

improve the telecommuting experience would be to maintain the flexibility effect while developing means to reduce the interference effect. This intricate balancing of flexibility and interference is achieved through boundary work (Ashforth, Kreiner, & Fugate, 2000) or boundary management tactics (Bacharach, Bamberger, & McKinney, 2000).

Boundary Work

In order to avoid the negative consequences of role blurring, telecommuters get involved in boundary work (Grensing-Pophal, 1998; Morris, 1997; Phillips, 1998), which involves creating and maintaining boundaries that demark roles. Telecommuters protect their personal life from the multiple demands of their professional roles, given the proximity of their workspace (Bourhis, 2001; Bredin, 1996). The expressed need to protect their workspace and schedule from intrusions by children, other family members, and friends is also quite salient. Interview responses illustrate the strategies adopted by telecommuters to manage interruptions from family members (St-Onge & Lagassé, 1996). Telecommuters must also deal with the tensions that arise between their professional roles and their personal roles (Codère, 1997; Gordon, 1998). A salient concern is that the proximity of work will erode commitments to personal life and that the proximity of home-based activities will hamper commitments to the work domain.

The specific activities of creating and maintaining boundaries that demark roles are abundantly described in the advice offered to telecommuters. For instance, Richter and Meshulam (1993) mention three strategies that telecommuters can adopt to manage the borders between their professional and private lives. First, a structural role redefinition requires that the telecommuter inform family members and colleagues of what they can now expect from him or her. Second, a personal role redefinition involves adapting expectations regarding family members and colleagues. Third, a reactive strategy involves trying to simultaneously satisfy a

number of conflicting demands made by family members and colleagues, without taking action to reduce the ambiguity of the situation. In fact, solely the two first strategies could be expected to reduce the stress felt by telecommuters because they reduce interference between their professional and personal domains. According to Bredin (1996), telecommuters need to set up rules that will govern their new working arrangement. In particular, they are encouraged to (a) insist on the fact that they are working even if they are at home, (b) inform family members and friends of the hours when non work related phone calls and meetings are allowed, (c) use the word "office" to designate the home work space, (d) establish a list of rules for family members with regards to interruptions, pauses, work schedules, etc., (e) wear the same clothes at home as in the traditional office location, (f) answer the phone the same way as in the traditional office location, and (g) share household chores with other family members.

In sum, a good deal of the advice given to telecommuters involves creating and maintaining boundaries that demark roles. This advice also exemplifies that boundary work is conducted at the center of social relationships (Bacharach, Bamberger, & McKinney, 2000). Consequently, the degree and nature of the support available in social relationships are likely to shape the conduct of boundary work.

Home Support

Although little is known about the conditions for successful boundary work, it is apparent that relevant role set members may either help or hinder the process of creating and maintaining boundaries that demark roles. People look to other people to fulfill their socioemotional needs. In a central office setting, those "other people" are likely to be colleagues or the leader. In a home-based telecommuting arrangement, members of the home environment are regarded as influential role set members. According to Richter and Meshulam (1993),

telecommuters often reconsider their decision to telecommute when family members do not accept or do not respect the boundaries they set. Further evidence suggests that family interruptions reduce satisfaction with telecommuting (Hartman, Stoner, & Arora, 1991). In sum, social support from the home domain would appear to influence the telecommuting experience.

Social support, however, is a multidimensional construct, as evidenced by theorizing from various disciplines (e.g., Caplan, 1974; Cassel, 1976; Cohen & Wills, 1985; Gottlieb, 1978; House, 1981). Caplan (1974), for instance, discusses the provision of psychological resources, task sharing, and material and financial resources. Social support, according to House (1981), includes emotional support, instrumental support, informational support, and evaluative support. Finally, the synthesis offered by Cohen and Wills (1985) includes (a) esteem support, which is information that the person is esteemed and accepted; (b) informational support, which is help in defining, understanding, and coping with problematic events; (c) social companionship, which involves spending time with others in leisure and recreational activities; and (d) instrumental support, which is the provision of financial aid, material resources, and needed services. In a telecommuting arrangement, esteem, informational, and instrumental support appear most likely to facilitate boundary work, which should allow reductions in role blurring and thus improve the telecommuting experience.

Given the stated need to set and maintain boundaries in a telecommuting setting as well as the need for cooperation between family members in this process, we investigated the hypothesis that social support for telecommuting from members of the home environment will have a positive influence on telecommuting outcomes. This reduction in interference effect is expected to hold to the extent that social support for telecommuting does not compromise the ability to stretch time and space (i.e., the flexibility effect).

Research Methods

Questionnaire and Sample

We conducted a survey of telecommuters in three companies located in Canada. The coordinator of the telecommuting program within each company distributed structured questionnaires. This distribution methodology ensured that respondents were true telecommuters rather than after-hours telecommuters. All questions were pre-tested and appropriate changes were made to the questionnaire. In order to maintain anonymity, the study participants returned the questionnaire directly to the researchers in a sealed pre-addressed envelope.

A total of 153 participants from a federal government agency completed and returned the questionnaire (a response rate of 67%), 32 from a high-tech organization (a response rate of 32%), and 8 from one branch of a financial institution (a response rate of 66%). The final sample consisted of 193 telecommuters, for an overall response rate of 58%, which is relatively high considering that the questionnaire was somewhat lengthy. The mean age of the study participants was about 42 years, and 56% were male. Most respondents had at least an undergraduate degree (59.7%), while about 25% had a junior college degree, and about 16% had a high school diploma. They had been with their organizations for about 16 years on average, and within a telecommuting arrangement for 2 years and 8 months on average. The two top reasons given for choosing a telecommuting arrangement were to reduce commuting time and enjoy more flexibility.

Since the relationships involved in this study require the presence of other people sharing the home domain, we created two sub-samples of telecommuters. The first sub-sample includes 88 telecommuters who had an employed spouse. The second included 93 telecommuters who

had at least one child living at home. The selection of these sub-samples was deemed necessary in order to obtain valid assessments of the dimensionality of the social support scales.

Measures

Unique operational measures were developed for this study (available upon request).

Questions were worded in French, and English versions of the questionnaire were forwarded to respondents upon request. Factorial and reliability analyses were conducted within each subsample in order two identify the latent dimensions of each multi-item scale.

The dependent variables included in this study are perceived telecommuting outcomes and telecommuting satisfaction. Our measure of telecommuting outcomes is somewhat different from the one used in a previous telecommuting study (Hartman, Stoner, & Arora, 1991). Rather than ask respondents to assess their productivity when they work at home relative to their productivity when they work at their central office, respondents were requested to express the effects of telecommuting on various areas of their professional and personal lives. The focus was therefore more on the overall effects of telecommuting (at-home/in-office combination) than on the effects of working at home. On a seven-point scale, respondents indicated whether they had experienced positive or negative change since they had begun telecommuting $(1 = \underline{\text{much worse}})$ than before to 7 = much better than before). The scale included 18 items, including statements such as "the quantity of work I produce," "meeting my deadlines," "my creativity at work," "my quality of life in general," etc. Higher scores reflect greater perceived improvements in work outcomes in the telecommuting situation relative to the previous traditional office situation. Another dependent variable is how satisfied the telecommuter is with his or her telecommuting arrangement. This variable is deemed important because an unsatisfied telecommuter may wish to return to his or her "traditional" office setting, thereby compromising the company's

investment in training, business telephone lines, equipment, etc. involved in a telecommuting program. Taken together, the above variables provided multiple indications of the quality of the telecommuting experience.

The independent variables assessed home support for telecommuting. Two scales were developed to probe levels of support from the spouse and from other family members. The first scale contained 16 items on the perceived support for telecommuting provided by the respondent's spouse. The second scale contained 16 items on the degree of support for telecommuting provided by children and other family members. The development of both scales was based upon a review of the literature (e.g., Fritz, Narasimhan, & Rhee, 1998; Hartman, Stoner, & Arora, 1991; St-Onge & Lagassé, 1996; Wright & Oldford, 1995). Items were developed to reflect the various forms of social support that could be provided by members of the home environment. Responses were provided on a Likert-type format ranging from 1 (never) to 5 (very often) to reflect the frequency of various supportive behaviors.

Spouse Support Variables

Factor analyses were conducted with the sub-sample of telecommuters from the initial sample who had an employed spouse (Table 1 in the Appendix for factor items). The mean scores on each factor were used as dependent variables in the analysis phase of the study. The factor analysis on the 18 telecommuting outcomes using Kaiser's criterion and varimax rotation yielded five factors with clean loading patterns, explaining 71% of the scale variance. The first factor, labeled "job autonomy," contained six items (alpha = .79); the second, labeled "job performance," included four items (alpha = .85); the third, labeled "job involvement," included three items (alpha = .82); the fourth, labeled "work/life quality," included three items (alpha = .81); and the fifth, labeled "work relations," included two items (alpha = .60). In addition,

telecommuting satisfaction included three items (alpha = .87) and was added as a sixth telecommuting outcome variable.

A factor analysis conducted on the 16 spousal support items using Kaiser's criterion and varimax rotation yielded five factors with clean loading patterns, explaining 65% of the scale variance. The first factor, labeled "respect of work time," contained four items (alpha = .79); the second, labeled "agreement with telecommuting," included three items (alpha = .79); the third, labeled "non-work-related expectations," included two items (alpha = .83); the fourth, labeled "understanding," included four items (alpha = .40); the fifth, labeled "collaboration," included three items (alpha = .40). The lower reliability coefficients on the last two factors are somewhat problematic and can be included in the limits of the study. We find, however, that the factorial structure covers important dimensions of spousal support for telecommuting. In addition, the factors are similar to the instrumental and informational support dimensions discussed by Cohen and Wills (1985).

Family Support Variables

Factor analyses were conducted with the sub-sample of telecommuters from the initial sample who have at least one child living at home (Table 2 in the Appendix for factor items). The mean scores on each factor were used as dependent variables in the analysis phase of the study. A factor analysis on the 18 telecommuting outcomes using Kaiser's criterion and varimax rotation yielded five factors with clean loading patterns, explaining 71% of the scale variance. The first factor, labeled "work/life quality," included four items (alpha = .85); the second, labeled "job involvement," also included four items (alpha = .79); the third, labeled "job performance," included five items (alpha = .80); the fourth, labeled "work relations," included two items (alpha = .64); and the fifth, labeled "job autonomy," included three items (alpha =

.70). In addition, telecommuting satisfaction included three items (alpha = .84) and was added as a sixth outcome variable.

A factor analysis of the 16 family support items using Kaiser's criterion and varimax rotation yielded five factors, explaining 66% of the scale variance. An ambiguous factor containing only one item was dropped and another item with a low factor loading was also dropped from further analyses. The first factor, labeled "non-work-related expectations," included four items (alpha = .81); the second, labeled "respect of work time," included five items (alpha = .68); the third, labeled "understanding," included three items (alpha = .72); the fourth, labeled "agreement with telecommuting," included two items (alpha = .80). The factorial structure obtained on the family support scale is not directly comparable to the factorial structure obtained on the spouse support scale. However, they both appear to include similar facets of social support from the home domain.

Analysis Strategy

Separate multivariate hierarchical regressions were conducted for each sub-sample. In both sets of analyses, the following control variables were included in the first step of the regression: Age, gender, the number of children living at home, the number of people sharing the workspace at home, and the ratio of central office hours to total hours. The social support dimensions were added on the second step of the regressions and the incremental increases in explained variance ($\Delta \underline{R}^2$) were considered. The regression coefficients were also examined to assess the relative importance of each dimension of social support.

Results

Tables 1 and 2 contain the means, standard deviations, and correlations for the study variables in each sub-sample. Examination of the descriptive statistics shows that respondents

held generally positive assessments of their telecommuting experience. On the seven-point scale, mean scores were all above 4.00, indicating that their telecommuting arrangement was perceived as an improvement relative to their previous central office situation. Across subsamples, the mean scores indicate that respondents perceived that improvements in work/life quality were most significant. The lowest improvement scores were obtained on the work relations outcome.

The hierarchical multiple regression results for the spouse sub-sample are in Table 3. The only significant contribution of the control variables ($\Delta \underline{F}$ 3.18, \underline{p} < 0.05) was found on the telecommuting satisfaction dependent variable. Thus, the results show that the control variables accounted for modest and generally non-significant variation in the dependent variables. They were, even so, included in the regression equations in order to control for possible spurious relations between social support variables and telecommuting outcomes. The spousal support variables, however, provided significant increases the explained variance of job autonomy ($\Delta \underline{F}$ 3.42, \underline{p} < 0.01), work/life quality ($\Delta \underline{F}$ 3.42, \underline{p} < 0.01), and telecommuting satisfaction ($\Delta \underline{F}$ 3.42, \underline{p} < 0.05).

The regression coefficients indicate how different forms of spousal support shape the telecommuting experience. The strongest positive influence can be credited to spousal understanding. Job autonomy, job performance, and work/life quality increase as a result of more spousal understanding being perceived. Spousal agreement with telecommuting and collaboration also show positive relationships with most telecommuting outcomes, with a significant coefficient on work/life quality and a marginally significant coefficient on telecommuting satisfaction. Interestingly, both perceptions of spousal respect of work time and

fewer non-work-related expectations are negatively related to job autonomy. Apparently, some forms of spousal social support have a negative influence on the telecommuting experience.

The regression results for the family support sub-sample are in Table 4. Again, the control variables accounted for modest gains in the explained variance of the six dependent variables. The four family support variables, however, accounted for significant increases in the explained variance of all six dependent variables. We therefore find strong evidence of a family social support effect within the family sub-sample (i.e., at least one child living at home).

The regression coefficients indicate that both family understanding and agreement with telecommuting were positively and generally significantly associated with telecommuting outcomes. No significant relationships were found between fewer family non-work-related expectations and telecommuting outcomes. Family respect of work time, however, showed negative coefficients across most telecommuting outcomes. In sum, the influence of family support on the telecommuting experience is generally positive and occasionally negative.

Taken together, these results support the proposition that social support from the home domain is a significant predictor of telecommuting outcomes. In both sub-samples, the inclusion of home support factors added significantly to the explained variance of the telecommuting outcomes. Within the spouse sub-sample, the support dimensions added significantly to the explained variance of three telecommuting outcomes. Within the family sub-sample, the support variables added significantly to the explained variance of all six telecommuting outcomes. The results also show that the influence of social support on telecommuting outcomes is generally positive, which is consistent with our hypothesis.

Discussion

We argued in this paper that the boundary work that is necessary to deal with role blurring could be facilitated or hindered by relevant role set members. Our findings generally support this proposition and show that some forms of social support from the home domain are more effective than others for fostering a positive telecommuting experience. In the spouse sub-sample, both spousal respect of work time and non-work-related expectations were negatively related to job autonomy, whereas spousal understanding had generally positive significant effects across the telecommuting experience spectrum. In the family sub-sample, the influence of family respect of work time was generally negative, whereas both family understanding and agreement with telecommuting had a positive influence on most outcome variables. Overall, the facilitating effect of social support from the home domain was stronger than the hindering effect.

The negative relations between some forms of home domain support and telecommuting outcomes appear counter-intuitive, although they are consistent with the notion that the relevance of different forms of social support is determined by the situation. Specifically, Cohen and Wills (1985) suggested that informational and esteem support are likely to be relevant for a broad range of stressful events, whereas the effectiveness of social companionship and instrumental support depends on a more specific match between the stressful event and the coping resource (p. 314). In a telecommuting arrangement, interference between professional and personal domains represents a focal stressful event and open and sensitive communication between family members seems to represent a critical coping resource. In a similar vein, our findings suggest that spousal understanding and collaboration as well as family understanding and agreement with telecommuting improve the telecommuting experience.

A number of the telecommuting recommendations found in the literature require that telecommuters inform family members of new behavioral guidelines (e.g., Bredin, 1996; Richter &

Meshulam, 1993). Therefore, informational support from the spouse and family members could very well represent the most valuable coping resource available to telecommuters. Our findings are consistent with this proposition since spousal understanding involves being sensitive and discussing professional concerns. Family understanding and agreement with telecommuting also reveal the presence of informational support.

The functions of other forms of social support from the home domain in a telecommuting arrangement are, however, not as clear. We note first that spousal respect of work time and fewer non-work-related expectations had a negative influence on the telecommuting experience. In addition, family respect of work time had a negative influence on telecommuting outcomes, especially on work relations and job autonomy. Although more empirical evidence is needed to support this explanation, we suggest that the pattern of negative influences of some forms of social support on the telecommuting experience is consistent with boundary theory. Specifically, some forms of social support could reduce the flexibility effect of telecommuting. Hence, in the spouse sub-sample, the negative influence spousal respect of work time and fewer spousal non-work-related expectations may be an indication of more segmented roles, which would lead to lower perceptions of job autonomy due to a loss of flexibility. In the family sub-sample, the negative influence of family respect of work time on the telecommuting experience may also indicate less flexible and permeable role boundaries.

The implications of these findings are that the home domain plays a significant part in explaining telecommuting outcomes. In particular, the understanding, agreement, and collaboration of members of the home domain appear most conducive to a positive telecommuting experience. Such forms of support, which parallel informational support, could be expected to reduce the interference and role blurring inherent in more integrated roles. Furthermore, they do not appear to compromise the flexible, permeable role boundaries that flow from work time and location flexibility. Interestingly,

other forms of social support from the home domain have a negative influence on the telecommuting experience. Such findings further emphasize the challenge of reducing interference while maintaining flexibility.

For telecommuters who share their home environment with other family members, the findings of this study suggest the need to distinguish between various forms of social support. Some forms of social support from the home domain that parallel instrumental support may seem beneficial. For instance, they may provide clear cues and symbols about the appropriate identity to adopt. However, such support may also impede the process of crossing role boundaries. The inherent flexibility of telecommuting should not be lost as a result of misguided home domain social support. Other forms of social support from the home domain that parallel informational support are evidently more effective and should be recognized as such. Our results suggest that keeping the lines of communication open can reduce interference and role blurring without compromising the flexibility advantage of telecommuting.

The results of this study should encourage organizations to consider support from the home domain in the telecommuting provision. Information regarding the need for support from members of the home domain should be communicated to individuals considering a telecommuting arrangement. Specifically, organizational representatives involved in the telecommuting program should emphasize the need for informational support from the spouse and other family members. Organizations might also consider involving other family members in information meetings and training initiatives that are often part of a formal telecommuting program implementation.

Finally, our study might encourage researchers to further seek and measure social support from outside the traditional organizational boundaries. A good deal of organizational research has been conducted on concepts such as perceived organizational support (Eisenberger, Huntington,

Hutchinson, & Sowa, 1986) and supervisor support or leader-member exchange (Graen & Uhl-Biehn, 1995), which are within the organizational realm. For instance, a quantitative review of the correlates of job burnout shows that much more research has been conducted on supervisor and coworker support than on family resources (Lee & Ashforth, 1996). Telecommuting and what has been called the virtual workplace represents a dramatic change in how we work (Cascio, 1999) and should therefore encourage new thinking about organizational support dynamics. One area that deserves more attention, in our view, is the role of the home domain in those dynamics. Work-family theorizing connected the professional and personal domains more than 20 years ago (Kanter, 1977) and new organizational realities such as international expatriation (Caligiuri, Hyland, Bross, & Joshi, 1998) and telecommuting are bringing them together in new settings. This sets the stage for research into the influence of phenomenon laying outside traditional organizational boundaries on organizationally relevant outcomes.

Conclusion

Conducted within a newly configured framework, our study found that various forms of social support from the home domain influence the telecommuting experience. Such findings, however, should be interpreted within the limits of this study. It should be noted that surveys were distributed to individuals who had chosen telecommuting on a voluntary basis.

Consequently, although our sample is representative of most telecommuting situations, our results may not be generalizable to situations where telecommuting is mandatory for employees. Also, because telecommuting was voluntary, some self-selection on individual traits may have reduced the observed variance in some variables, which ultimately provides a more conservative test of the hypotheses. In addition, the data were cross-sectional, which hinders causal inferences regarding the relationship between our independent variables and telecommuting outcomes.

Also, a retrospective design was used for all but one telecommuting outcome, which may have created errors in recall. However, such errors are unlikely given that the move from a traditional office setting to telecommuting is momentous. Finally, data on the independent and dependent variables were collected from the same source. We note, however, that the use of multiple-item scales reduces the possible negative influence of this common method bias.

Our study design also raises the question of whether similar results would have been obtained with a sample of people employed in a traditional office setting. The absence of a control group severely limits our ability to answer this question. We note, however, that a study conducted by Dixon and Webster (1998) found that the influence of family structures on stress is different for telecommuters than it is for people employed in traditional office settings. By extension, and given the abundant literature on the importance of the home domain in telecommuting arrangements, our findings are likely to be specific to telecommuting settings.

Beyond these limitations, our findings provide some indications about the influence of various forms of social support from the home domain on the telecommuting experience.

Although some of our findings challenge conventional wisdom, they appear to be consistent with the propositions of boundary theory. They further highlight the challenge of reducing the occurrence of role blurring while maintaining the advantage of flexibility. Meeting this challenge requires setting role boundaries within the home domain. Given that boundary work is conducted within social relationships, the roles of members of the home domain are especially significant in a telecommuting arrangement. According to our results, when the telecommuter's spouse or other family members provide appropriate forms of social support, the likelihood of a positive telecommuting experience is greater.

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APPENDIX

Table 1 Telecommuting outcomes and spouse support factors for the spouse sub-sample

Telecommuting Outcomes	Items from the Factor Analyses ^a
Job Autonomy	• The control I have over my work (.78)
	• My creativity at work (.70)
	• Absenteeism (time off) due to illness (.61)
	• Absenteeism (time off) due to family related reasons (.54)
	• The evaluation of my performance by my supervisor (.53)
	• Service to my clients (if applicable) (.49)
Job Performance	• Quality of the work I produce (.83)
	• Volume/quantity of work I produce (.77)
	My overall work productivity (for all workdays, in and away
	from the office) (.60)
	• Meeting my deadlines (.58)
Job Involvement	• My sense of belonging to my organization (.83)
	• My career opportunities (.80)
	• My involvement at work (.63)
Work/Life Quality	• The balance between my work and personal life (.87)
	• My quality of life in general (.74)
	• My job satisfaction (.60)
Work Relations	• Social interaction with my supervisor (.82)
	• Social interaction with my co-workers (.78)

Telecommuting	•	Satisfaction with respect to working at home
Satisfaction	•	Satisfaction with respect to your workspace at home
	•	Satisfaction with respect to your participation in the
		teleworking program of your organization
Spousal Support		My spouse or the adult living with me
Respect of Work Time	•	complains about the time I devote to my work when I am
		at home (.79)
	•	criticizes me for placing too much importance on my job
		(.79)
	•	is respectful of my schedule when I am working at home
		(.74)
	•	interrupts me when I am working at home (.65)
Agreement with	•	is in agreement with my working (.89)
Telecommuting	•	agrees on my working at home (.85)
	•	says that he/she appreciates the fact that I work at home
		(.65)
Non-Work-Related	•	expects me to do housework during my working time at
Expectations		home (.92)
	•	asks me to carry out jobs unrelated to my work during the
		time reserved for working at home (.83)
Understanding	•	complains about inconvenience caused by the fact that I
		am working at home (.61)

	•discusses with me my work-related problems (.56)
	•is insensitive to my professional problems (.56)
	•acts as if I am not working when I execute professional
	tasks at home (ex.: noisy behavior) (.48)
Collaboration	•gets involved in housework and/or provides care to other
	family members living with us, if that is the case (.76)
	•proposes new ways of integrating my working at home
	with the everyday routine (.58)
	•approves that I must go regularly to the organization's

^a The item loadings are in the parentheses.

Note. Negatively worded statements, that is those that mean more an undermining than helping, were recoded.

premises for my work (ex.: meetings) (.50)

Table 2 Telecommuting outcomes and family support factors for the family sub-sample

Telecommuting Outcomes		Items from the Factor Analyses ^a
Work/Life Quality	•	Absenteeism (time off) due to illness (.87)
	•	Absenteeism (time off) due to family related reasons (.83)
	•	The balance between my work and personal life (.70)
	•	My quality of life in general (.68)
Job Involvement	•	My career opportunities (.82)
	•	My sense of belonging to my organization (.81)
	•	My involvement at work (.64)
	•	My job satisfaction (.55)
Job Performance	•	Quality of the work I produce (.80)
	•	Volume/quantity of work I produce (.71)
	•	My overall work productivity (for all workdays, in and away
		from the office) (.67)
	•	Meeting my deadlines (.60)
	•	Service to my clients (if applicable) (.43)
Work Relations	•	Social interaction with my supervisor (.88)
	•	Social interaction with my co-workers (.73).
Job Autonomy	•	The control I have over my work (.77)
	•	My creativity at work (.71)
	•	The evaluation of my performance by my supervisor (.59)
Telecommuting	•	Satisfaction with respect to working at home

Satisfaction	Satisfaction with respect to your workspace at home
	Satisfaction with respect to your participation in the
	teleworking program of your organization
Family Support	My children and other family members
Non Work-Related	seem to forget that I have work to accomplish when I
Expectations	work at home (.79)
	•interrupt me or phone me at any time when I work at
•	home for my employer (.78)
•	•ask me to accomplish non-work related tasks or to help
	them (ex.: transportation, counseling) during the time
	devoted to my work at home (.72)
	•act as if I am not working when I accomplish professional
	work-related tasks at home (ex.: interruptions, telephone,
	noise) (.72)
Respect of Work Time	•blame me for being too preoccupied with my professional
	work (.90)
	•blame me for devoting too much time to my work (.82)
	•respect the family discipline we have established with
	respect to my working at home (.54)
	•blame me for not giving them enough time (.48)
	•express some doubts about my efficiency with respect to
	my working at home (.41)

Understanding	do not respect my working schedules (breaks, beginning
	and end of the day) while I am at home (.79)
	•disapprove the fact that I must go to the organization's
	premises on a regular basis to work there (.66)
	•prevent me from devoting the time I would like to give to
	my work (.59)
Agreement with	•say that they benefit from the fact that I can work at home
Telecommuting	on a regular basis (ex.: presence, security, and availability in
	case of emergency) (.89)
	•say that they appreciate the fact that I accomplish part of
	my professional work at home (.86)

^a The item loadings are in the parentheses.

Note. Negatively worded statements, that is those that mean more an undermining than helping, were recoded.

Table 1 Zero-order correlations among study variables for the spouse sub-sample

Variables	Mean	$\overline{\mathrm{SD}}$	01	02	03	04	05	90	07	08	60	01	Ξ	12	13	14	15
01. Age	40.41	6.13				7											
02. Gender	0.52	0.50	05														
03. Children at Home	1.59	06.0	05	16													
04. People in Workspace	0.51	1.10	.11	04	.27*												
05. Ratio	0.39	0.22	11	03	11.												
06. Respect of Work Time	4.54	0.62	.24*	.14	05	04	.13										
07. Agreement with Telecommuting	4.13	0.97	25*	80.	.07	05	03	01									
08. Non Work-Related Expectations	4.21	1.02	.31**	.04	60:	.02	23*	.35**	10								
09. Understanding	3.91	0.61	90	.02	03	.03	01	.38***	.33**	.16							
10. Collaboration	3.12	0.83	.04	11	.16	quant quant	12	.16	.35**	80.	.13						
11. Job Autonomy	4.90	08.0	.04	90	.21*	04	07	18	.22*	20 [†]	14	.19					
12. Job Performance	5.09	0.93	12	60.	.12	05	14	10	Ξ	05	.20 [†]	.07	***29.				
13. Job Involvement	4.10	06.0	14	.03	04	30**	05	.07	.22*	.02	.18⁴	.01	.35***	.45**			
14. Work/Life Quality	5.77	1.07	05	.05	60.	26*	09	.04	.32**	60	.22*	.34**	.57***	***19	.46***		
15. Work Relations	4.06	0.72	02	.15	00.	90.	.16	Ε.	.01	.04	.03	.02	.26*	.31**	.41**	.13	
16. Telecommuting Satisfaction		89.0	.12	.02	90:-	29**	15	.21*	.16	.17	.26*	.01	.22*	.33**	.35**	.36**	60:
† Significant at .10; * Significant at .05; ** Significant at .01; *** Significant	05; ** §	ignifica	unt at .01	; *** Sig	mificant 6	at .001											

Significant at .10; * Significant at .05; ** Significant at .01; *** Significant at .001

Table 2 Zero-order correlations among study variables for the family sub-sample

Variables	Mean	SD	01	02	03	04	90	90	07	80	60	10	-	12	13	14
01. Age	40.66	6.25														
02. Gender	0.43	0.5020	20 _†													
03. Children at Home	1.89	90 76.0	90:-	13												
04. People in Workspace	0.61	1.23	.10	07	.18											
05. Ratio	0.38	0.23	20 ₊	.12	80:	.03										
06. Non Work-Related Expectations	4.47	0.64 .14	.14	11	.05	.03	16									
07. Respect of Work Time	4.73	0.4100	00	90:	.07	03	90.	.33**								
08. Understanding	4.72	0.51 .05	.05	90	08	80	.03	.42**	.37***							
09. Agreement with Telecommuting	3.52	1.15	09	Ε.	.02	17	03	.04	.04	17						
10. Work/Life Quality	5.66	1.05	04	.02	14	.11	.07	90.	04	.16	.26*					
11. Job Involvement	4.49	0.8412	12	90.	09	23*	13	.14	02	.31**	.17	.44**				
12. Job Performance	4.50	0.8708	08	.02	.05	06	18	.12	08	.15	.23*	.62***	***09			
14. Work Relations	4.02	0.73	09	.20*	03	90.	.20 [†]	.17	01	.23*	.18⁴	.20⁴	.39***	.33**		
15. Job Autonomy	4.66	0.81	.05	90	.17	03	08	.05	20 [‡]	90.	.26*	.55***	.48**	***85.	.31**	
16. Telecommuting Satisfaction	4.47	90. 99.0	80.	13	03	20 ₊	21*	.32**	90.	.33**	.13	.28**	.43***	.41***	.10	.22*
† Significant at .10; * Significant at .05; ** Significant	icant at	.05: *	** Sign	ificant a	t .01; **	:* Signi	at .01; *** Significant at .001	.001								

Significant at .001 Significant at .01; Significant at .05; T Significant at .10;

Table 3 Hierarchical regression estimates for the spouse sub-sample

	Job Autonomy	Job Performance	Job Performance Job Involvement	Work/Life	Work Relations	Telecommuting
				Quality		Satisfaction
Step 1				11011		
Control Variables						
$R^2\Delta$.05	.07	Ξ	proved a	90:	.18
$ar{ ext{F}\Delta}$	0.85	1.16	1.73	1.74	1.02	3.18*
Step 2						
Respect of Work Time	28*	22	04	-111	.01	.15
Agreement with Telecommuting	.13	60:-	.19	.12	01	.21
Non-Work-Related Expectations	25*	07	.01	19	60°	05
Understanding	.28*	.31*	.18	.25*	.03	91.
Collaboration	.14	01	90	.26*	01	.05
$R^2\Delta$.19	80.	.07	.18	.01	.15
$ar{ ext{F}}\Delta$	3.42**	1.25	1.18	3.42**	0.14	3.02*
Total R ²	.24	.15	.18	.29	.07	.33
F	2.33*	1.22	1.47	2.72**	0.55	3.32**

Note: Standardized regression weights are reported.

† Significant at .10; * Significant at .05; ** Significant at .01

Table 4 Hierarchical regression estimates for the family sub-sample

	Work/Life	Job Involvement	Job Involvement Job Performance	Work Relations	Job Autonomy	Telecommuting
	Quality					Satisfaction
Step 1						
Control Variables						
$R^2\Delta$.07	.07	.05	60:	.04	.12
$\overline{ ext{F}\Delta}$	1.10	1.25	0.81	1.52	09.0	2.21
Step 2						
Non-Work-Related Expectations	*.08	.03	.07	.19	.05	.16
Respect of Work Time	17	20⁴	20	22*	33**	07
Understanding	.35**	.4]**	.23†	.30**	.20	.21
Agreement with Telecommuting	.34**	.24*	.28*	.28**	.34**	.22*
$R^2\Delta$.15	.16	Ξ.	.19	.17	.12
$\overline{ ext{F}\Delta}$	3.60*	4.01**	2.56*	4.77**	4.05**	2.92*
Total R ²	.22	.24	.16	.28	.21	.25
ثنرا	2.29	2.58*	1.62	3.13**	2.18*	2.65*

Note: Standardized regression weights are reported.

† Significant at .10; * Significant at .05; ** Significant at .01