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Coworking: Crafting Lives Alongside Each Other

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COWORKING: CRAFTING LIVES ALONGSIDE EACH OTHER

A Dissertation

Submitted to the Graduate Faculty of the
Louisiana State University and
Agricultural and Mechanical College
in partial fulfillment of the
requirements for the degree of
Doctor of Philosophy

in

The Department of Psychology

by

Claire Frances Taylor
B.A., Rice University, 2009
M.A., Louisiana State University, 2011
May 2015

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Abstract

Coworking is a form of alternative work arrangement in which communities of individuals share common office and work space but are most often employed by different employers within different fields/industries (Foertsch, 2011). Despite its growing prevalence, coworking is nearly absent from the organizational literature. The present mixed methods study introduced and defined the construct of extent of coworking. Extent of coworking is conceptually defined in this research as the degree to which an individual spends her/his workweek coworking. Qualitative literature review was conducted to establish this construct, and qualitative interview data provided support for the definition. Using job crafting and conservation of resources theory, the present study also investigated how extent of coworking related to employees' personal and professional outcomes of work-family conflict, job satisfaction, life satisfaction, and job performance. Minimal support was found for the links connecting extent of coworking to the outcomes of interest, suggesting possible measurement issues. Job crafting was not shown to moderate any of the proposed relationships. This research extends the application of a quantitative measure of job crafting to the US and provides a foundation for better understanding coworking within the organizational literature.

Introduction

Coworking is a form of alternative work arrangement in which communities of individuals share common office and work space but are most often employed by different employers within different fields/industries (Foertsch, 2011). Attracted by the low costs of shared overhead and office amenities, small organizations (i.e., no more than ten people) operate in some coworking spaces alongside individual workers (King, 2011). Individuals cowork for varying portions of their workweek (i.e., one or more days a week). When not coworking, individuals primarily pursue other work arrangements that are alternative (e.g., working from home), while some pursue more traditional arrangements (e.g., working from a centralized office).

The number of coworking individuals is growing, as is evidenced by the growing number of coworking spaces. The number of spaces operating around the world has roughly doubled each year from 2006 to 2011, with nearly 1,800 spaces open as of August 2012 and 684 of those in the United States (Foertsch, 2012c). The alternative work arrangement of coworking is thought to offer financial and infrastructural benefits to businesses and work-life benefits to individuals. However, very little empirical research has systematically examined this emergent work phenomenon. Therefore, this study introduces *extent of coworking* to academic literature.

The scientific merit of this mixed-method research project is two-fold. First, it defines the construct of extent of coworking through review of work arrangement literature and qualitative interviews. Second, drawing on established theory, this research examines how extent of coworking may be related to personal and professional outcomes, and how job crafting may partially mediate these relationships. The constructs of interest are measured using validated measures from the literature, and the proposed relationships between constructs are investigated

using the statistical technique of linear regression and bootstrapping methodology developed by Preacher and Hayes (2008).

There are numerous scientific implications and practical applications that result from this work. From a scientific perspective, this work establishes a structured self-report instrument to measure *extent of coworking*, and it extends the application of established theories to describe the relationships this newly established construct has with other variables. From a practical perspective, beginning to understand the impact extent of coworking has on individuals' lives may enable employment policies to be modified to maximize the benefits coworking can offer to employees and organizations. The present work may also uncover how coworking can be leveraged to address shortcomings in other work arrangements in order to benefit both employees and their organizations.

Review of Literature

Work Arrangements

Although relatively new to the research literature, coworking is a form of work arrangement that shares meaningful similarities with other, more established work arrangements in the organizational science literature. Please refer to Figure 1 for a visual representation of the relational position of coworking within the alternative work arrangement literature.

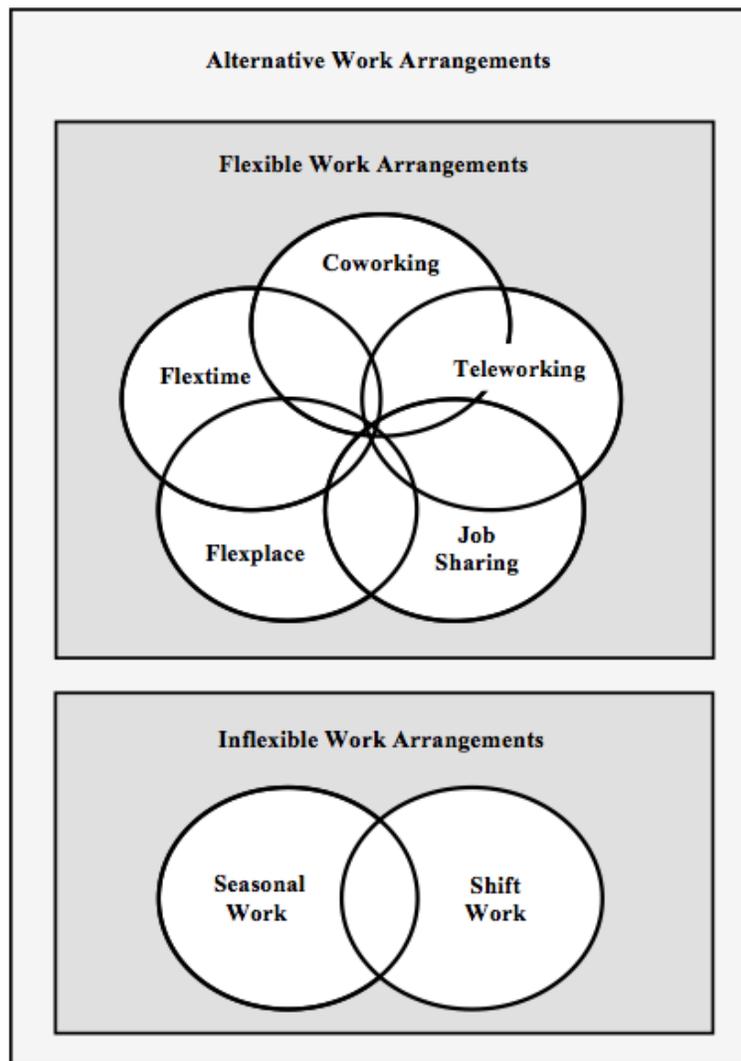


Figure 1. Alternative Work Arrangement Model

Alternative (i.e., nontraditional) work arrangements include all work schedules other than the standard (i.e., traditional) five-day, 40-hour workweek (Armstrong-Stassen, 1998).

Alternative work arrangements include two subsets of work arrangements: inflexible and flexible. Inflexible work arrangements do not enable individuals to choose their own time and/or place to work. Seasonal work and shift work are two examples. Flexible work arrangements allow individuals to choose their own time and/or place to work (Bailey & Kurland, 2002; Baruch, 2001; Feldman & Gainey, 1997). Included in this definition are flextime, flexplace, coworking, and teleworking. Flexible work arrangements have been lauded as enabling employees to better manage and balance their work and nonwork responsibilities (Allen et al., 2013). Flexible work arrangements are increasing in popularity, and they are often used to attract, motivate, and retain key talent within organizations (Hill et al., 2008; Society for Human Resource Management (SHRM), 2011). Although flexible work arrangements have become an increasingly viable type of work arrangement over the past decade, more remains to be done to optimize the utilization of these work arrangements (SHRM, 2011). Coworking may be an additional option that can further enable and improve workplace flexibility.

Teleworking (a term used interchangeably with telecommuting) is one type of flexible work arrangement that, like coworking, allows individuals to work remotely for their employing organizations (Bailey & Kurland, 2002; Baruch, 2001; Feldman & Gainey, 1997). Teleworkers most often work at home or at public spaces (e.g., cafés or libraries) for all or some portion of their workweek (Golden, 2006). In a typical teleworking arrangement, individuals work for organizations that have physical office space, although some may work for organizations without centralized offices (Golden, 2007). Similarities between teleworking and coworking include high levels of autonomy and self-direction exercised by individual workers. Individuals in both work

arrangements generally exercise great latitude in deciding how they complete their work. They can also decide how many days they wish to telework or cowork, and how many days, if any, they wish to pursue other work arrangements.

However similar, the work arrangements of teleworking and coworking remain distinct. Teleworking can be done anywhere, though individuals most often telework from home and less often from public spaces like libraries and cafés. This means teleworking often takes place in isolation, or in spaces where work is not the primary focus of all individuals within the space. Interaction with others can be limited and not related to work. Coworking, on the other hand, takes place at coworking spaces where individuals gather to work alongside each other. By definition, coworking takes place in shared spaces. Additionally, most teleworkers work remotely for their employing organizations. In sharp contrast, industry polling reveals that only about one-quarter of coworkers work remotely for an employing organization, and that just one-quarter of these coworkers work for larger organizations of more than 100 employees (Foertsch, 2011b). Despite these differences, teleworking is well established in the literature and informs the present investigation of coworking.

Coworking. The greater coworking community fosters and values collaboration and connectivity among the independent workers within it (Poehler, 2011). A given coworking space may be comprised of entrepreneurs, freelancers, teleworkers, and others who want the autonomy of working independently, blended with the stability, resources, and community provided by a more typical office workplace (Rueb, 2010). Coworking spaces tend to operate during normal business hours (i.e., approximately 8AM to 6PM) on weekdays, and may or may not have weekend hours. Some spaces also allow coworkers to choose memberships that allows for 24-hour access to the facilities. This allows coworking spaces to accommodate all work schedules.

Coworkers often do not have access to other office spaces. They may be freelancers or entrepreneurs without access to traditional offices. Their employing organizations may have no physical offices or centralized locations, or may be housed within coworking spaces. Even when coworker's organizations do offer office space, individuals may not live near these offices, and they may have infrequent access to these facilities at best. For example, a coworker may live and work in Seattle but work for an organization based in Pittsburgh. Some individuals may cowork to reduce their commuting time, cost, and stress by working closer to their homes. Teleworkers may also choose to work from a coworking space, rather than from home or public spaces, for some or all of the workweek. This means that some teleworkers are coworkers, but coworkers are not necessarily teleworkers.

Coworking spaces can provide services typically offered by standard office environments, such as conference rooms and fax machines. Individuals may not have regular access to such infrastructure at home or at public work locations (e.g., cafés). The growing number of coworking spaces has resulted in an array of options for features and amenities to enhance one's productivity and/or work style (e.g., specialized tools, opportunities to practice presentations, community classes; Spinuzzi, 2012).

Several factors may help explain the growth of coworking spaces. First, entrepreneurial activity has remained relatively stable in recent years, despite recent recessionary economic periods in the U.S. (Fairlie, 2012). Contract workers, freelancers, and small business owners comprise an important part of employed individuals in the United States. Additionally, improvements in information technology have enabled increasing numbers of professional employees to spend part of their working hours outside of a company's physical location and for others to work remotely nearly full-time (Bailey & Kurland, 2002; Korte & Wynne, 1996). Real-

time communication tools (e.g., instant messaging and video conferencing) continue to become easier and less expensive to use. These conditions contribute to coworking becoming an increasingly viable work arrangement, as individuals continue to shape their own careers and do not need to be collocated to do business or work together.

Past research investigating employee outcomes in the context of flexible work arrangements has shown mixed results (see Gajendran & Harrison, 2007 for a meta-analysis of teleworking). However, focusing on the extent to which an individual engages in a particular work arrangement has helped clarify findings. For example, the more extensively an individual teleworks (i.e., more days per week or percentage of hours teleworked per week) the more work-to-family conflict s/he will experience, and the less family-to-work conflict s/he will experience (Allen et al., 2013). The proposed research follows this precedent, treating coworking as a continuous variable (i.e., extent of coworking), recognizing that the amount of time an individual spends coworking may alter how the arrangement relates to her/his personal and professional outcomes.

Extent of teleworking has been used in past research to describe the extent to which an individual spends her/his workweek teleworking (e.g., Golden & Veiga, 2005; Golden, 2006; Gajendran & Harrison, 2007; Fay & Kline, 2011), and has been operationalized as the percentage of total working hours or days per week spent teleworking (e.g., Golden & Veiga, 2005). The proposed research characterizes “extent of coworking” in an analogous way. Extent of coworking is conceptually defined in this research as the degree to which an individual spends her/his workweek coworking. This is operationally defined as the percentage of total working hours spent coworking per week, and as the number of days per week spent coworking.

Extent of teleworking has been shown to be related to many important personal and professional outcomes, including those of interest in the proposed research (i.e., work-family conflict, Golden, Veiga, & Simsek, 2006; job satisfaction, Golden & Veiga, 2005; life satisfaction, Virick, DaSilva, & Arrington, 2010; and job performance, Golden, Veiga, & Dino, 2008) as well as others (e.g., turn over intentions, Golden et al., 2008). A 42 study meta-analysis by Gajendran and Harrison (2007) supported the beneficial effects teleworking has on individual outcomes, including lower work-family conflict and higher levels of satisfaction, as well as perceived autonomy, performance, stress, and turnover intentions. The present study draws on these findings to inform hypotheses concerning how extent of coworking relates to a nomological network of personal and professional outcomes. This is done to establish construct validity and to position this new construct within the organizational literature.

Research Context

Coworking is all but absent from academic literature. Only one published scientific journal article to date has explored coworking. Spinuzzi's (2012) "Working Alone Together: Coworking as Emergent Collaborative Activity" focuses on defining what a coworking space is, rather than what the work arrangement of coworking is or what the implications the arrangement may have for individual coworkers or employing organizations. Spinuzzi's study examines nine coworking spaces in Austin, Texas, with data collected through interviews with the owners of the coworking spaces and a total of only 17 coworkers from three of the coworking spaces (Spinuzzi, 2012). It is a first step toward providing a more concrete definition of what characterizes a coworking space.

Non-academic industry-based research has also been conducted on coworking, and it focuses more closely on characterizing coworkers and coworking spaces. Some coworking

spaces collect information from their members about their coworking-related experiences, and share this information on their own websites (such as Office Nomads; see the blog entry <http://officenomads.com/2011/10/how-do-the-nomads-commute/>, “How Do the Nomads Commute?”). Most notably, Deskmag (an online magazine dedicated to coworking; see deskmag.com) coordinates a yearly survey that collects data from individual coworkers and coworking space owners to examine demographics and trends within the community. Deskmag’s 2nd Annual Global Coworking Survey conducted in 2011 showed that almost one third of coworkers (32%) report that they cowork each day of the workweek (Foertsch, 2012a). A quarter (28%) of coworkers report that they cowork three to four days week, and another quarter (26%) cowork one to two days per week (Foertsch, 2012a). Some individuals even report joining coworking spaces for the networking and business opportunities provided by attending the events hosted by the spaces, even though they do not intend to work from the space regularly (Foertsch, 2012b). These numbers and other surveys of coworkers suggest that most coworkers value the contact and networking opportunities that coworking spaces provide (e.g., Foertsch, 2012b). Coworking spaces are thought to offer social interaction and community that teleworkers often miss out on when working from home or public spaces (Foertsch, 2012b). The tagline of the Seattle coworking space Office Nomads summarizes the goal simply as “Individuality without isolation.” Coworkers also report improvement to their job performance after beginning to cowork. Sixty-eight percent report increased focus, 64% report being better able to meet deadlines, and 62% report increased standards for their work (Foertsch, 2012a).

These data suggests that coworking may benefit individuals’ personal and professional outcomes, even when pursued for a small portion of the workweek. However, the degree to which individuals benefit from different extents of coworking is not clear. The present research

addresses this gap in the scientific literature by introducing the construct of extent of coworking. Quantitative survey measures establish a nomological network that links extent of coworking to personal and professional outcomes. Qualitative interviews help establish the content validity of this construct. They will be used to determine if extent of coworking had been properly defined and framed within the research project.

Additionally, data in the present research will be collected from coworkers across the United States. This aids in establishing external validity, as the sample will be geographically diverse, and will therefore allow the findings to be generalized for coworkers across the nation, rather than just a particular city or region. This should result in significant impact and value through the present work.

Theoretical Foundations

On its own, extent of coworking is a meaningful construct that characterizes the work arrangement pursued by individual coworkers. Establishing a nomological network that links extent of coworking to important personal and professional outcomes helps properly position extent of coworking within the organizational literature and provides additional utility. It provides context for this new construct and informs the definition of the construct by determining what relationships it has with other variables. The sections above describe and define extent of coworking within the context of the work arrangement literature. The sections below introduce job crafting and conservation of resources theory to provide the theoretical basis for the proposed links between extent of coworking and personal and professional outcomes.

In the present research, coworking is viewed as a way to enable job crafting. Job crafting describes the mechanisms and behaviors through which individuals shape their personal work experiences while working. Coworking provides individuals with opportunities to engage in job crafting activities that may not be otherwise available to them through other work arrangements.

Conservation of resources theory compliments job crafting in the present research. Whereas job crafting describes *what* individuals do at work, through behavior and psychological evaluation, conservation of resources theory aids in the understanding of *how* these workplace happenings relate to personal and professional outcomes. It does this by describing how use and accrual of resources, both tangible and intangible (e.g., money and time), in one area of an individual's life can affect the available resources, and therefore experiences, in another.

Job Crafting

The tasks and relationships associated with a particular job determine its design, and can influence how individuals experience work and its meaningfulness (Ilgen & Hollenbeck, 1991;

Hackman & Oldham, 1980). Individuals can initiate changes to the design of their jobs, and these changes can affect how individuals experience their work (Berg, Dutton, & Wrzesniewski, 2012). Job crafting is the method by which employees modify and amend the design of their jobs to increase the meaningfulness of the work they perform (Wrzesniewski & Dutton, 2001). Meaningfulness in this context refers to the extent to which employees believe their work is significant (Rosso, Dekas, & Wrzesniewski, 2010). Increased job satisfaction, motivation, and performance are some of the many benefits associated with meaningfulness (Hackman & Oldham, 1980; Grant, 2007; Rosso et al., 2010). Job crafting allows employees to reframe or modify their work to be more meaningful, fulfilling, and satisfying (Wrzesniewski & Dutton, 2001). Job crafting achieves this by allowing individuals to tailor their jobs to better fit their skills and interests. Many types of job redesign involve changes initiated by management, a top-down approach. In contrast, job crafting enables employees to modify their jobs from the bottom-up (Berg et al., 2012). This enables employees to leverage the unique and intimate knowledge they have of their jobs to redefine them.

Job crafting also plays an important role in the context of the current employment landscape (Berg et al., 2012). It enables employees to maintain satisfaction and engagement through cultivating meaningfulness in their work (Wrzesniewski, Berg, & Dutton, 2010), even as they continue retire later in life (Johnson, Butrica, & Mommaerts, 2010). Job crafting also enables younger generations (i.e., X, Y, and Millenials) to build the meaningful careers they have come to expect (Berg et al., 2012; Twenge et al., 2010). In a time when the marketplace is rapidly changing, job crafting caters to the need for employees and organizations to be innovative and adaptive rather than reactive (Frese & Fay, 2001; Grant & Ashford, 2008).

Job crafting can take on several forms. Wrzesniewski and Dutton (2001) originally theorized that a job could be changed physically (i.e., the quantity and quality of tasks completed on the job), psychologically (e.g., how one perceives job-related tasks), and relationally (e.g., changing who and how one interacts with on the job). Recent research has suggested that job crafting can take on other forms as well (Bakker, Tims, & Derks, 2012). For example, sales associates have been shown to self-initiate skill development (Lyons, 2008). Additionally, employees sought feedback, social support, and challenges when they were needed (Petrou et al., 2012).

Berg and colleagues (2012) refined the original categorization to include task, relational, and cognitive crafting. Task crafting describes how employees modify the responsibilities specified by their job descriptions. This can be achieved by adding or subtracting tasks, modifying the tasks themselves, or altering the amount of time, energy, and attention allocated to specific tasks. Relational crafting describes how employees modify how, when, or with whom they interact while performing their jobs. Cognitive crafting describes how employees can modify their interpretation of the tasks and relationships that comprise their jobs.

Employees engage in job crafting when they utilize one or more of these crafting techniques (Berg et al., 2012). Coworking may give individuals opportunities to craft their jobs in ways they might not be able to otherwise. Take, for example, a freelancer or remote worker who coworks for some or all of her/his workweek. Instead of working at home or a café with little to no interaction with others, coworking provides opportunities for the freelancer to exchange knowledge and build relationships with those s/he works alongside at her/his coworking space. S/he may become part of the community at the location s/he coworkers, demonstrating relational crafting. In addition to changing where her/his work is completed and

engaging in informal learning, the freelancer may also grow her/his business and social networks through the connections s/he establishes at her/his coworking space. Now, her/his job may include different and/or additional networking and/or learning components that it did not before s/he began coworking. These changes are forms of task crafting. These work-related activities may be enriching to the freelancer, both professionally and personally. They may also enable the coworker to feel greater significance in her/his work by providing insight, support, and/or other assistance to her/his fellow coworkers. These are forms of cognitive crafting.

Individuals who craft their jobs while coworking may do so to counteract some of the negative outcomes associated with other work arrangements, including teleworking. The goals of job crafting (i.e., satisfaction, meaningfulness, and engagement; Wrzeniewski and Dutton, 2001) are at odds with some of the negative outcomes associated with teleworking, namely work-family conflict and relation impoverishment (Gajendran & Harrison, 2007). Surveys of the coworking community also suggest that coworking may have developed in response to some of the shortcomings associated with teleworking and standard office environments. Prior to coworking, nearly sixty-percent (58%) of coworkers worked from home while another quarter worked in traditional offices (22%) (Foertsch, 2012d). Individuals report that coworking has positively impacted their work and family lives in multiple ways, including improvements to their social and business networks, productivity, and self-confidence (Foertsch, 2012d). Individuals who cowork choose their own workplaces and their associated amenities and characteristics. They modify their working conditions in ways that may provide positive opportunities while simultaneously mitigating negative influences on both their professional and personal lives.

Job crafting is not an all or nothing endeavor. Instead, employees can engage in job crafting to differing degrees. Researchers in The Netherlands (Tims, Bakker, & Derks, 2012) were the first to develop and validate a quantitative scale that measures the degree to which individuals participate in job crafting behavior. Their operationalization of job crafting is based on the job demands-resources (JD-R) model (Bakker & Demerouti, 2008; Bakker & Demerouti, 2007; Demerouti et al., 2001), which states that all job characteristics can be categorized as job demands or job resources. Job demands are job characteristics that require employees to maintain physical and/or psychological (i.e., cognitive and/or emotional) effort, and therefore are associated with certain costs. An example in the context of coworking is maintaining focus on a thoughtful task while others are talking in the coworking space. Job resources are job characteristics that enable work goals attainment and/or reduce job demands, as well as counteract the associated physiological and psychological costs. They stimulate personal development (Bakker & Demerouti, 2007). Examples in the context of coworking would be networking functions offered by the space and feedback from other coworkers within the space. Succinctly, Tims, Bakker, and Derks (2012) operationally define job crafting as “the changes that employees may make to balance their job demands and job resources with their personal abilities and needs (p. 174)”. The results of Tims, Bakker, and Derks’s (2012) work indicated that there are four job crafting dimensions, with two relating to each broad class of job characteristics: increasing social job resources, increasing structural job resources, increasing challenging job demands, and decreasing hindering job demands.

Although these dimensions do not map directly on to the types of crafting identified by past theoretical work (i.e., task, relational, and cognitive crafting; physical, psychological, and relational crafting), these different taxonomies do share similar themes. These different

categorization schemes all indicate that changes to what work is done, how and where work is done, and who work is done with are at the heart of job crafting. Given that quantitative measurement of job crafting is in its infancy, the present research uses this scale in a global fashion for an overall measure of job crafting behavior.

Linking Job Crafting and Conservations of Resources

Job crafting informs the present investigation by detailing how individuals' behaviors, cognitions, and relationships shape their experiences while coworking. Job crafting describes how individuals can choose to allocate more or less time, energy, or other resources to different aspects of their jobs to affect their experience of meaningfulness, satisfaction, or other outcomes. However, job crafting does not describe the process by which these work-related activities affect individuals' abilities to handle stressors and strains both in and out of their work lives. The understanding of how professional and personal realms tie together is provided by conservation of resources theory. This theory strengthens the explanatory power provided by job crafting by offering additional detail about how demands and resources from work and family realms affect each other. This aids in the explanation of how extent of coworking, a characterization of work-related activity, directly affects outcomes at work and at home, as well as how job crafting, a characterization of work-related behaviors and cognitions, might partially mediate these connections. Therefore, the present research draws on conservation of resources theory to describe how coworking, through both extent and job crafting, may relate to individuals' personal and professional outcomes though its influence on individuals' available resources for addressing personal and professional demands.

Conservation of Resources Theory

Conservation of resources theory has been used in past research (e.g., Golden, 2006) to explain how telecommuting affects work and life family outcomes. Conservation of resources theory describes how individuals seek to accumulate and retain resources, such as money, love, empathy, or advice, in order to minimize stress (Hobfoll, 1988, 1989). Individuals build up reserves to protect against future losses when they are not immediately confronted with circumstances that threaten their current resources (Lee & Ashforth, 1996; Wright & Cropanzano, 1998). When an individual perceives a stressor, s/he will work to conserve resources by decreasing effort in one of her/his domains (Hobfoll, 1989). Domains within an individual's life (e.g., work and home/family) compete for resources in order to maintain and replenish the resources needed within the given domain (Hobfoll, 1989).

Golden (2006) suggests that teleworking helps defend against resource loss and allows for improved 'stress resistance capacity' (Hobfoll, 1989) by allowing individuals to have greater control over their work-related interactions and their commutes. Teleworkers tend to have greater autonomy over when and how they perform work activities, including responding to requests from others (Kurland & Eagan, 1999). This enables teleworkers to conserve emotional energy, minimizing or avoiding depletion (Golden, 2006). Teleworking also helps preserve individuals' emotional energy and time through the absence of a commute; this protects resources and allows individuals to reallocate resources saved to acquire other resources (Golden, 2006; Hobfoll, 1989). As Golden (2006) points out, teleworking individuals can reallocate the time and energy saved by eliminating their commute to reducing work-family conflict (Duxbury, Higgins, & Neufeld, 1998), pursuing leisure activities (Guimaraes & Dallow, 1999), and increasing job and life satisfaction (Bailey & Kurland, 2002).

Given that the coworking shares some of the characteristics of teleworking, including control over work activities, coworkers may also experience increased ‘stress resistance capacity’ and other positive outcomes that teleworkers do. In the present research, conservation of resources theory provides insight into how coworkers may reduce their use or increase their reserves of resources through job crafting, and how these activities may contribute to the positive outcomes experienced by coworkers.

Proposed Hypotheses and Research Questions

Having laid the theoretical framework for the study above, research questions and hypotheses will now be proposed. Please refer to Figure 2 for the theoretical model and Figure 3 for the measurement model.

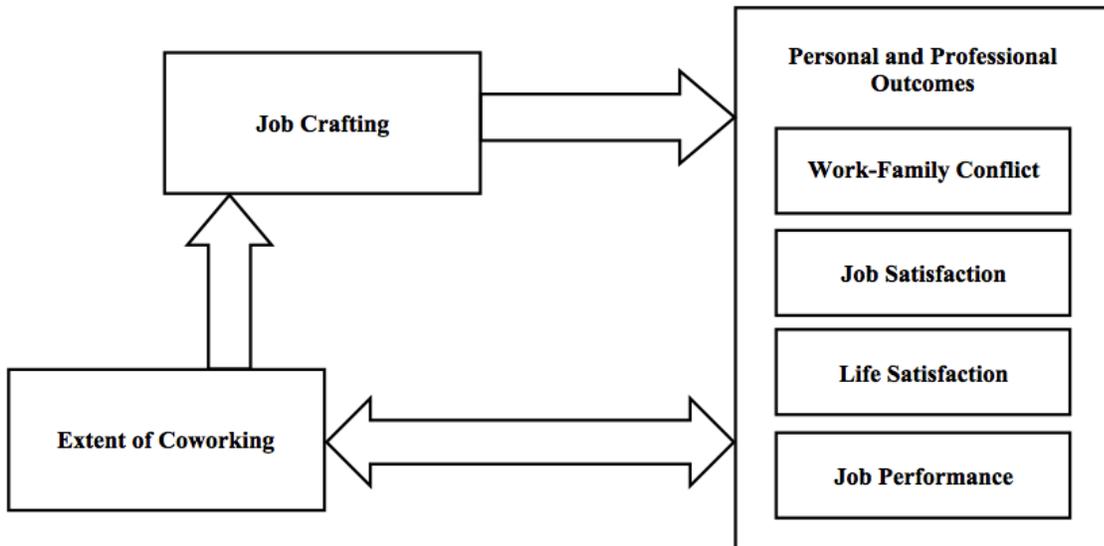


Figure 2. Theoretical Model

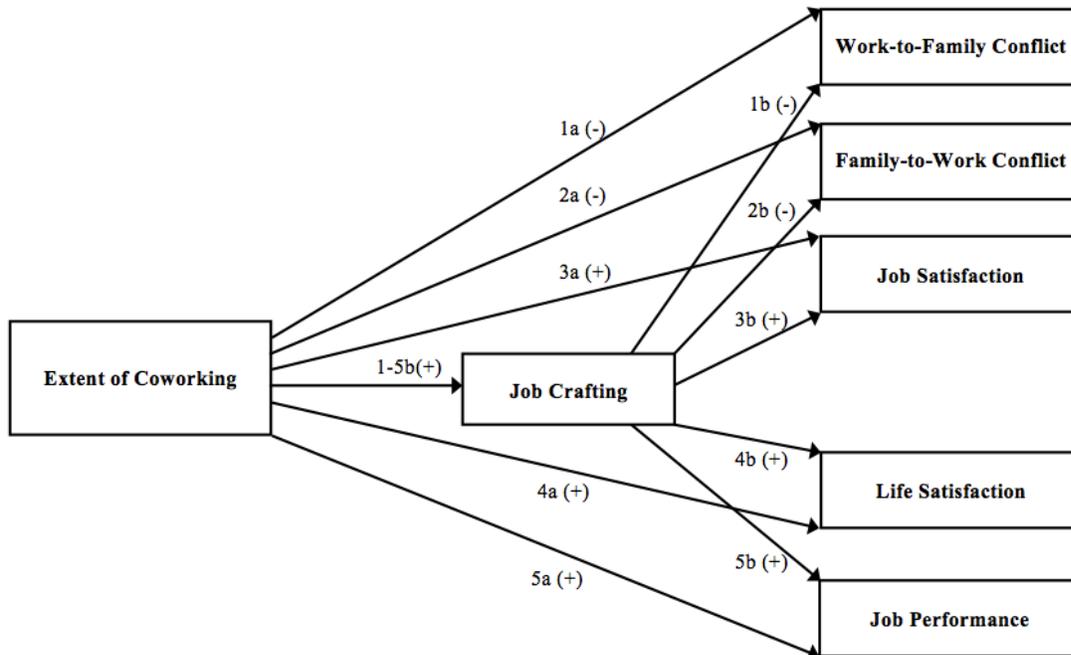


Figure 3. Measurement Model

Establishing the Content Definition of Coworking

Qualitative research questions are proposed to address the overarching themes of the present research and to provide a priori structure for exploring the modal themes identified in qualitative data collected. In contrast to the precise relationships explored through the hypotheses proposed later in this paper, these research questions are concerned with evaluating the definitions and content domains explored in this proposal.

The novelty of *coworking* and *extent of coworking* within the organizational literature has led the present research to draw on research concerning other constructs that have been well established within the literature, namely teleworking and extent of teleworking. Research investigating these constructs provides much of the basis for the hypotheses set forth in this research. The similarities and differences between teleworking and coworking are explored in this section, and the hypotheses set forth reflect these comparisons. Although teleworking provides a logical basis for the current work exploring coworking, it is not clear if these connections and assumptions based on past research make practical sense. In short, it is unclear if teleworking is an adequate anchor for defining coworking in the present research.

Therefore, the following research question is proposed:

Research question 1: Is teleworking a proper anchor for defining coworking in the present research?

In a similar vein, the novelty of the present research means that the definition and measure of extent of coworking are based primarily on industry research, rather than past scientific literature. Although this industry research has been based on large samples of coworkers, the scientific rigor of the sampling methods and statistical analyses is not discernable. This past work provides mainly descriptive statistics that allow for characterization of the

coworking population at large. However, given the questions that surround the collection and processing of this data, it is unclear if the definition and measure of extent of coworking in the present study are accurate and whether they capture the complete content domain.

Therefore, the following research question is proposed:

Research question 2: Do the definition and measure of extent of coworking in the present study capture the appropriate and complete content domain?

Exploring the Nomological Network of Coworking

In this section, relationships between extent of coworking and personal and professional outcomes of work-family conflict, job satisfaction, life satisfaction, and job performance are proposed. Additionally, job crafting is hypothesized to partially mediate these relationships. There are likely other factors unaccounted for in the proposed model that may also mediate the relationship between extent of coworking and personal and professional outcomes. However, given the novelty of the proposed project and its focus on defining extent of coworking within the established work arrangement and organizational literature, job crafting is the only mediating variable proposed in the present research.

Work-family conflict. Within the work-family literature, the definition of family encompasses a broad swathe of people. Those “related by biological ties, marriage, social custom or adoption” are all included, as are immediate and extended family members (Edwards & Rothbard, 2000, p. 179). The inclusivity of this term means that virtually all working adults have family and therefore experience some degree of work–family conflict (Golden et al., 2006; Carlson, Kacmar, & Williams, 2000).

Work-family conflict occurs when demands, expectations, and pressures from work and family roles are mutually exclusive and result in interrole conflict (Edwards & Rothbard, 2000;

Greenhaus & Beutell, 1985). These conflicting demands can originate from individuals within one's work and family spheres, as well as from an individual's internally held role expectations (Kahn et al., 1964). Work and family domains can both be the source of role demands, so work-family conflict has more recently been conceptualized as a bidirectional phenomenon, with work-to-family conflict (WFC) being characterized with work interfering with family, and family-to-work conflict (FWC) being characterized with family interfering with work (e.g., Carlson et al., 2000; Frone, Russell, & Barnes, 1996; Netemeyer, Boles, & McMurrin, 1996; Greenhaus & Beutell, 1985).

Past research concerning work-family conflict in the context of alternative work arrangements has showed mixed results (see Gajendran & Harrison, 2007 for meta-analysis of work-family conflict in context of teleworking). While teleworking is thought to provide a means for the maximum integration of work and family (Dart, 2006), research that separates WFC and FWC in the context of teleworking (i.e. Golden et al., 2006) has demonstrated the differential impact teleworking has on each. Golden and colleagues (2006) found that as extent of teleworking increases, individuals' levels of WFC decrease but their levels of FWC conflict increase. Additionally, meta-analysis of work family conflict in the context of flexible work arrangements research has demonstrated that uncoupling WFC and FWC is important for understanding the differential effects flexibility has on the two directions of work-family conflict (Allen et al., 2013). In order to best understand the impact coworking has on each domain, the proposed research investigates each direction of work-family conflict separately.

Theory suggests that the extent to which some teleworkers bring work into their homes can negatively impact WFC. As individuals begin to telework more intensely, work may begin to interfere with family responsibilities due to the blurring of lines between the two spheres within

the home space (Bailey & Kurland, 2002). Instead of preserving resources, teleworking may begin to drain them. Boundary theory describes how an individual can separate the various aspects of her/his life to instill order (Ashforth, Kreiner, & Fugate, 2000). Matthews, Barnes-Farrell, and Bulger (2010) found that increased separation of work and family through strict time and location boundaries related negatively to work-family conflict. Intense levels of teleworking tend to diminish the temporal and spatial separation between work and family, so there is reason to believe this may lead to higher levels of work-family conflict for teleworkers.

The teleworking literature described above provides insight into the way extent of coworking may relate to work-family conflict. Coworking shares teleworking's flexibility, as coworkers choose when and where (i.e., which coworking space) they work. Similar to teleworking, coworking allows individuals to exercise control over their work-related interactions, as they are not frequently collocated with those they interact with for work purposes. Individuals also choose when they would like to utilize their coworking space, further enabling to them to exercise control over social interactions. In contrast to teleworking, coworking takes place outside of the home, helping to reinstate some of the temporal and spatial boundaries that teleworking often blurs or abolishes when pursued to greater extents. This may help enable coworkers to separate their work and family lives, allowing for the protection of resources in both domains and leading to less work-family conflict.

Coworking also allows individuals to exercise control over their commutes, which should also help lower levels of work-family conflict. Individuals can decide how far they wish to commute by their choice of coworking space. This further enables coworkers to determine their mode of transport (e.g., walking, public transit, biking) that might be prohibited by longer commutes or commutes through certain areas. Reduced time and energy spent commuting should also help preserve resources and lead to lower work-family conflict.

In order to best understand how extent of coworking relates to work-family conflict, the proposed research follows the trend in teleworking literature to separately investigate WFC and FWC. Given the reasoning above, it is hypothesized that extent of coworking will relate negatively to both WFC and FWC. Greater levels of coworking should result in less WFC and less FWC.

Therefore, the following hypotheses are proposed:

Hypothesis 1a: Extent of coworking is negatively related to work-to-family conflict.

Hypothesis 2a: Extent of coworking is negatively related to family-to-work conflict.

The relationship between extent of coworking and work-family conflict may be partially mediated by job crafting. Individuals perform job crafting when moving work out of the home or other non-work related space and into a coworking space. This may lead to the greater separation of work and home discussed above, leading to lower levels of work-family conflict. Non-work related interactions may be reduced during their working hours. This crafting may reduce interruptions of work and cause less switching between work and non-work tasks. Physical separation between work and non-work domains may also enable easier cognitive separation of these domains, allowing individuals to focus solely on work tasks while working, rather than being distracted by family demands in the home or non-work demands in public spaces. Additionally, moving work out of the home may help prevent work from creeping into the home and interrupting non-work tasks and activities. All of these forms job crafting enabled by coworking may reduce work-family conflict in both direction. Therefore, job crafting should partially mediate the relationship between extent of coworking and work-family conflict.

Therefore, the following hypotheses are proposed:

Hypothesis 1b: Job crafting partially mediates the relationship between the extent of coworking and family-to-work conflict.

Hypothesis 2b: Job crafting partially mediates the relationship between the extent of coworking and work-to-family conflict.

Job satisfaction. Job satisfaction, another outcome of interest in the present study, describes how content an individual is with her/his job (Spector, 1997). Literature exploring the connection between teleworking and job satisfaction shows mixed results (Golden & Veiga, 2005; see Bailey & Kurland, 2002 for meta-analysis demonstrating mixed results).

Some research has found that individuals who telework have higher levels of job satisfaction (e.g., Belanger, 1999; DuBrin, 1991; Norman et al., 1995), no matter the extent to which they pursue this work arrangement (e.g., McCloskey & Igarria, 1998; Olson, 1989). This idea is supported by a meta-analysis by Gajendran and Harrison (2007). They found a positive correlation between job satisfaction and teleworking, even when teleworking was treated as a categorical variable (i.e., teleworkers and non-teleworkers). As explanation for this relationship, Golden and Veiga (2005) argue that teleworking may allow individuals to modify and adjust their job-related activities to better satisfy their own needs and desires (Baltes et al., 1999; Duxbury Higgins, & Mills, 1992; Pierce & Newstrom, 1980, 1983). Additionally, teleworking may enable individuals to more easily fulfill their work and family responsibilities (Riley & McCloskey, 1997).

Other research indicates that individuals who telework extensively may have lower levels of job satisfaction (Chapman et al., 1995; Cooper & Kurland, 2002; Huws, Korte, & Robinson, 1990). These findings are explained by teleworkers' decreased in-person social interactions with

coworkers and increased feelings of isolation that accompany teleworking to a greater extent. These things may negatively impact job satisfaction.

Research also supports the idea that extent of teleworking and job satisfaction are related in a curvilinear fashion. Research (e.g., Virick et al., 2010; Golden, 2006; Golden & Veiga, 2005) suggests that there is an inverted U relationship between the extent of teleworking and job satisfaction. This research suggests that job satisfaction is greatest when individuals telework in moderate amounts or when other mediating factors are at play. Virick and colleagues (2010) explain these findings. Individuals who telework to a lesser extent do not gain the benefits associated with teleworking because they rarely engage in the work arrangement. Therefore, they do not experience increased job satisfaction. At moderate intensities of teleworking, individuals spend enough time in the office to gain the benefits of social interaction provided by face-to-face relationships, thereby thus satisfying both individual and organizational needs that enhance job satisfaction (Golden & Veiga, 2005). In contrast, individuals who telework to a greater extent do not have the opportunity for face time office and suffer from social isolation, thereby lowering job satisfaction.

The above characterizations of teleworking in relation job satisfaction might provide insight into the relationship between coworking and job satisfaction. Coworking to a greater extent is not likely to produce the negative social consequences caused by a lack of in-person interaction associated teleworking to a greater extent. In contrast, coworking to a greater extent will lead to greater opportunity for interaction within the coworking space. Coworkers can have frequent contact with the other individuals while at their coworking space. Moreover, the greater the extent to which individuals cowork, the less likely they are to feel isolated, as they will have opportunities to engage in more social contact at their coworking spaces. This may satisfy

individual needs that enhance job satisfaction. The greater the extent to which an individual coworks, the higher her/his level of job satisfaction should be.

Therefore, the following hypothesis is proposed:

Hypothesis 3a: Extent of coworking is positively related to job satisfaction.

The relationship between extent of coworking and job satisfaction may be partially mediated by job crafting. Like teleworkers, coworkers may also be able to craft their jobs and work-related activities to fulfill their personal needs and demands as well as those of their work without draining resources from other areas of their lives. This should lead to greater job satisfaction. Individuals who cwork, just as those who telework, have control and flexibility in how, where, and when they carry out their work. Coworking may provide individuals with opportunities to craft their jobs that might not otherwise be available to them, including increased in-person interaction with others. This may provide coworkers with greater job satisfaction via job crafting. Therefore, job crafting should partially mediate the relationship between extent of coworking and job satisfaction.

Therefore, the following hypothesis is proposed:

Hypothesis 3b: Job crafting partially mediates the relationship between the extent of coworking and job satisfaction.

Life satisfaction. Life satisfaction, the third outcome of interest in the present study, is one's overall assessment of his/her life at a particular point in time, including feelings and attitudes (Diener, 1984). In the literature, the relationship between teleworking and life satisfaction is largely unexplored (Virick et al., 2010) and absent from recent meta-analyses (e.g., Gajendran and Harrison, 2007).

Similar to research investigating the relationship between teleworking and job satisfaction, research has suggested different patterns of relationship between telecommuting and life satisfaction. Hartman, Stoner, and Arora (1992) suggest that increased levels of job satisfaction associated with teleworking should lead to increased levels of life satisfaction. They argue that the flexibility associated with teleworking should lead to greater life satisfaction due to the enhanced ability to pursue non-work and family-related interests. In contrast, Vitterso and colleagues (2003) found no relation between the number of days spent working from home and life satisfaction. Lastly, Virick and colleagues (2010) found that the relationship between extent of teleworking and life satisfaction is curvilinear. Those who telework moderate amounts had the highest levels of life satisfaction, while those who teleworked to greater and lesser extents had lower levels of satisfaction. Virick and colleagues (2010) explain these findings in a way that is similar to explanations given for the relationship between teleworking and job satisfaction. Individuals who telework to a greater extent may suffer from social isolation, and individuals who telework to a lesser extent will not gain the benefits associated with the flexibility afforded by teleworking. Teleworkers tend to have control over when and how they perform work activities, including responding to requests from others (Kurland & Eagan, 1999). This enables teleworkers to conserve emotional energy, minimizing or avoiding depletion of resources (Golden, 2006). Given the positive correlation (e.g., $r = .31$; Tait, Padgett, & Baldwin, 1989) between job and life satisfaction in the literature, it is not surprising that the effects of teleworking have similar impact on these two forms of satisfaction.

Drawing on this limited past research and what is known about coworking, extent of coworking should be positively related to life satisfaction. Coworking to a greater extent should result less social isolation, as coworkers will have increased opportunities to have social and

professional interactions at their coworking space when they spend more time there. Choosing to include these interactions in one's work is a form of job crafting. Additionally, coworkers should experience the benefits of work arrangement flexibility at all levels of coworking. Coworkers choose the amount of time they wish to spend coworking, so flexibility itself should not affect the relationship between extent of coworking and life satisfaction. Instead, flexibility should be viewed as an enabler of job crafting and should impact life satisfaction through that mechanism. Extent of coworking is believed to relate positively to life satisfaction, and job crafting is believed to partially mediate this relationship. Therefore, the following hypothesis is made:

Hypothesis 4a: Extent of coworking is positively related to life satisfaction.

Hypothesis 4b: Job crafting partially mediates the relationship between the extent of coworking and life satisfaction.

Job performance. Job performance, the final outcome of interest in the present study, is defined as how well an individual performs his or her job. Although many researchers contend that teleworking enhances job performance (Bailey & Kurland, 2002; Igarria & Guimaraes, 1999; Staples, Hulland, & Higgins, 1999), there is limited research to support these claims. Work by Gajendran and Harrison (2007) showed that while teleworking had no impact on self-reported performance, it did have a positive effect on supervisor ratings of performance. Gajendran and Harrison (2007) explain that teleworking may indirectly improve performance by bolstering employees' perceptions of control over where, when, and how they complete their work, as perceived control has long been theorized as an antidote to stress (Ganster & Schaubroeck, 1991; Karasek, 1979).

Closely associated with performance is productivity, defined as how much work can be accomplished in a given amount of time. Improved productivity is one of the most commonly

claimed benefits of teleworking (McCloskey & Igbaria, 2003; Pinsonneault & Boisvert, 2001). Worker accounts of increased productivity when teleworking are prevalent throughout the literature (e.g., Bailyn, 1989; Baruch & Nicholson, 1997; Belanger, 1999; Frolick, Wilkes, & Urwiler, 1993; Kinsman, 1987; Hartman et al., 1992; Manning, 1985; Olson, 1982; Pratt, 1984; Shirley, 1985). Increased productivity is often attributed to teleworkers having fewer disruptions while working (Bailey & Kurland, 2002). Teleworking also provides individuals the opportunity to craft their work environment to align with how and when they work most effectively (Bailey & Kurland, 2002). Increases in productivity are also explained by the time saved by not commuting, making increased work hours possible (Apgar, 1998). However, as Bailey and Kurland (2002) point out, perceptions such as these are confusing productivity with absolute amount of work performed, which are closer associated with job performance. Additionally, most reports of increased productivity due to teleworking are self-report data, with a few exceptions (e.g., DuBrin, 1991; Geisler, 1985). Since individuals most often telework by choice, reporting may be biased. Teleworkers may feel the need to justify and legitimize their work arrangement to others within their organization by overstating their performance under the circumstances. The present research is concerned with self-reported performance of coworkers, however, and this bias should be less of a concern as most coworkers are entrepreneurs, freelancers, or otherwise self-employed. Coworkers should not be motivated to misrepresent their reports of productivity.

Although somewhat mixed, past research concerning teleworking and job performance suggests that coworkers may also report increased performance. It also suggests that extent of coworking should positively related to performance. Just like teleworkers, individual coworkers decide how, when, where, and with whom they complete their work. This should lead to greater

productivity and overall performance, due in part to decreased interruptions. Like teleworkers, coworkers can optimize their working conditions for maximum productivity and performance, as coworkers choose which coworking space they work in, and by extension, the amenities, resources, and opportunities available to them. As extent of coworking increases, individuals spend increased time at their coworking space, enabling them to make greater use of these amenities, resources, and opportunities, leading to increased performance. Therefore, the following hypothesis is proposed:

Hypothesis 5a: Extent of coworking is positively related to job performance.

In discussing the hypothesis above, increased use of amenities, resources, and opportunities as the extent of coworking increases can be viewed as job crafting. Coworkers are shaping their jobs to lead to increased performance. Therefore, job crafting may partially mediate the relationship between extent of coworking and job performance, and the following hypothesis is proposed:

Hypothesis 5b: Job crafting partially mediates the relationship between the extent of coworking and job performance.

Exploratory variables. In addition to the variables of interest discussed in the hypotheses above, the present research also investigates individual differences that are thought to have theoretical importance to understanding the proposed relationships. These individual differences were assessed in the quantitative portion of the research, and used as control variables in analyses to strengthen the internal validity of the present study.

Personality. Personality may affect how extent of coworking relates to personal and professional outcomes. The Five Factor Model (i.e., “Big Five” of emotional stability, extraversion, openness, conscientiousness, and agreeableness) encompasses broad dimensions of

personality (Costa & McCrae, 1992). While past meta-analysis has shown conscientiousness to be predictive of job performance across numerous circumstances, the relationships between the other four traits and performance have proven to be less consistent (e.g., Barrick & Mount, 1991; Hertz & Donovan, 2000).

Individuals vary in the degree to which they possess each trait, and this may impact how they experience different aspects of their personal and professional lives in relation to coworking. For example, individuals who are more extraverted may need more social interaction to buffer against isolation than individuals who are more introverted. As a result, more extraverted individuals may need to cowork more intensely than more introverted individuals in order to achieve high levels of job satisfaction and life satisfaction. However, it may also be the case that more extraverted individuals are able to maximize their benefits from coworking by focusing on engaging in activities that fulfill their needs during the time they do spend coworking. They may also seek out other opportunities, like happy hours and lunch presentations, either through their coworking spaces or other organizations, to meet their needs for social engagement.

Similarly, individuals who are more conscientious may have an easier time remaining focused and organized when coworking than those who are less conscientious. This may impact their job performance, as well as their job satisfaction, as conscientious individuals may complete their work with greater ease and in a more timely fashion. However, most (58%) coworkers were working from home before they began coworking (Foertsch, 2012d), so it is also likely that coworkers are accustomed to the self-directed and autonomous work style that both work arrangements require to be successful.

Rounding out the Big Five are agreeableness, openness to experience, and emotional stability. Individuals who are more agreeable may benefit more from coworking than those who are less agreeable. They may be better at building social connections and may be more capable of benefitting from the social opportunities coworking provides. Individuals who rate high on openness to experience may also benefit more from coworking than those who rate lower. They may be better suited to capitalize on the opportunities for experiences and social connections provided by their coworking spaces, whereas those who are less open may be less inclined to engage in these opportunities. Emotional stability may also play a role in personal and professional outcomes for coworkers. Those who are low in emotional stability may have trouble with the highly fluid characteristics of coworking, whereas those who are high in emotional stability may have no trouble coping with the sometimes unpredictable environment.

Individuals choose to cowork, rather than engage in other work arrangements, and they tend to have control over when they work and at what coworking space. This self-selection into the work arrangement of coworking may mean that coworkers possess personality traits that allow them to be successful in the work arrangement. This may mean that personality does not impact coworkers' experiences in their personal and professional lives. Given the concerns about the impact of personality on personal and professional outcomes in the context of coworking, and that it is unclear whether personality will affect the relationships proposed in the present research, participants' personality characteristics will be assessed using a ten items from Gosling, Rentfrow, and Swann (2003).

Work arrangements. Individuals may engage in any number of different work arrangements during the portion of the week they are not coworking, including working from home, working from public spaces, and working from a company office. Even though two

individuals may cwork to the same extent, they may pursue other work arrangements to different extents. For instance, two individuals may both cwork three days a week, but one may work from home the remaining two days of the workweek while the other may work from a company office.

There is reason to believe that the cworking population sampled in the present study will pursue similar work arrangements aside from cworking, namely working from home or public spaces. As discussed in earlier sections, most cworkers are freelancers, entrepreneurs, or otherwise self-employed, and these individuals generally do not have access to typical office space. Industry polling indicates that only about one-quarter of cworkers work for an employing organization, and that just one-quarter of these cworkers work for larger organizations of more than 100 employees (Foertsch, 2012a). Many of the smaller organizations may not offer office space, or may be housed within a cworking space, as previously discussed. Even when organizations do offer office space, individuals may not live near their employers' offices, and may have infrequent access to these facilities at best.

Because there is some degree of uncertainty about what work arrangements cworkers will pursue when they are not cworking and about how much time will be spent pursuing these alternative arrangements, participants will be asked to report the days and hours per week they spend in work arrangements other than cworking. This will allow for calculation of the extent to which these other work arrangements are pursued such that this information can be used as exploratory control variables.

Demographic variables. In addition to the exploratory control variables outlined above, there are other potentially confounding variables that may threaten the internal validity of the present study. These variables will be assessed during the quantitative online survey portion of

the present study so that they may be controlled for during exploratory analyses to investigate their effects on the relationships proposed in the present research.

There is reason to believe that demographic variables, such as age, gender, income, education, and city size and location, have the potential to impact the relationships proposed in the present study. Past research (e.g., Golden & Veiga, 2005; Golden et al., 2006) has controlled for age and gender when exploring the impact extent of teleworking has on personal and professional outcomes, including those of interest in the present research. However, age and gender have not accounted for significant portions of variance in these models.

There is also reason to believe that work and job related variables may impact the relationships proposed in the present study. For example, past teleworking research showed that tenure with an organization accounted for a significant portion of the variance in job performance (e.g., Golden et al., 2008) and both directions of work-family conflict (e.g., Golden et al., 2006).

Materials and Methods

Population of Study

The participants in the present research were adults 18 years of age and older who worked fulltime (i.e., at least 30 hours per week). To be included in quantitative analyses, participants must have coworked, on average, at least one day a week and have coworked for at least one month prior to completing the survey. Of the 162 respondents to the survey, 44 were excluded because they did not provide information about the number of days per week they coworked and/or about how long they had been coworking, and because they did not complete any of the substantive survey questions. Six more participants were excluded because they did not answer any questions beyond the length of time they had been coworking. Eight more were excluded because they did not answer any questions beyond the amount of time they spent coworking each week. Four more participants were excluded because they did not meet the minimum criteria for inclusion.

Additionally, data from individuals who indicated that they worked from an organization's office at least 50% of the workweek were excluded from analyses on the basis that these individuals were not considered to be representative of the coworking population targeted by the present research. Although it may be inferred that most coworkers in this study do not have access to traditional centralized office spaces and are most likely to work from home or public spaces by necessity when not coworking, this additional measure of inclusion criteria was implemented to control for the possible effects of that time spent in a traditional office environment may have on coworkers. An additional three participants were excluded because they did not meet these criteria.

Of the 97 participants remaining, 13 were excluded because they did not complete the job crafting measure, central to the hypotheses set forth in this research. The final sample included 84 coworkers.

Just over half (55%) of participants were female, and the average age was 34 years old ($SD = 9.43$). Excluding one participant who was 67, participants ranged in age from 21 to 53 years old. Ten percent of participants reported high school as their highest level of education. Just over half (55%) reported bachelor's degrees as their highest level of education, while just over a quarter (26.3%) reported master's degrees. Two and a half percent each indicated their highest level of education as doctorates, associate's degrees, and some college but no degree.

Forty percent of participants indicated they were freelancers, over half (55%) considered themselves entrepreneurs, and 37.5% reported they were employees of an organization. A small portion of participants were pursuing education, with 3.8% reporting they were part-time students and 2.5% reporting they were full-time students. No participants indicated they were retired, and 3.8% reported they were in-between jobs or looking for work. The average reported income was \$83,830.77 ($SD = 79,691.12$).

On average, participants had been coworking for 1.81 years ($SD = 1.85$), and they had been coworking at their current space for 1.33 years ($SD = 1.13$). The average population of the cities where participants coworked was 35,4420 people ($SD = 37,1308$). Just under half (45.23%) of participants were from the Midwest (i.e., Illinois, Indiana, Michigan, Ohio, Wisconsin, Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, and South Dakota), and just under one-third (29.76%) were from the West (Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming, Alaska, California, Hawaii, Oregon, and Washington). Participants from the Northeast (i.e., Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island,

Vermont, New Jersey, New York, and Pennsylvania) comprised 14.28% of respondents.

Participants from the South (i.e., Delaware, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, Washington D.C., West Virginia, Alabama, Kentucky, Mississippi, Tennessee, Arkansas, Louisiana, Oklahoma, and Texas) accounted for 10.71% of all respondents.

Participants worked for an average of 52.26 hours per week ($SD = 13.41$) and an average of 5.67 days per week ($SD = 1.08$). Participants coworked an average of 30.14 hours per week ($SD = 15.02$) and an average of 3.83 days per week ($SD = 1.43$). On average, participants spent 58.71% of their working hours coworking ($SD = 26.27$) and coworked for some portion of 68.35% days they spent working ($SD = 25.11$). Please see Table 1 for levels of engagement in other work arrangements.

General Recruiting Procedure

To recruit participants, owners and operators of coworking spaces were contacted via email to request their help in data collection efforts. If they agreed, they were asked to forward an email with all relevant information, including a link to the online survey, to the individuals who coworked at their space and to encourage participation.

Contact information for coworking facility operators was collected using Google. The search terms “coworking” and “cowork” plus the name of the 50 largest cities in United States were used and contact information was collected from the website results. Additionally, coworking newsgroups, wikis, and organization websites were searched for relevant contact information and lists of coworking facilities to ensure that the original methodology was thorough. A follow up email was sent about a week after the initial email.

Table 1. Means and Standard Deviations for Variables of Interest

Variables	N	Mean	SD
Extent of Work Arrangements			
Extent of Coworking (%)	84	59%	26%
Extent of Coworking (Days)	84	3.83	1.43
Extent of Work from Home (%)	84	28%	22%
Extent of Work from Home (Days)	84	2.58	2.34
Extent of Work from Public Space (%)	84	5%	7%
Extent of Work from Public Space (Days)	84	.55	.91
Extent of Work from Office (%)	84	6%	17%
Extent of Work from Office (Days)	84	.51	1.29
Extent of Work from Other (%)	84	4%	10%
Extent of Work from Other (Days)	84	.46	1.11
Personal and Professional Outcomes			
Work-to-Family Conflict	83	2.87	.73
Family-to-Work Conflict	83	2.30	.73
Job Satisfaction	84	4.03	.56
Life Satisfaction	83	3.75	.75
Job Performance	84	4.24	.55
Job Crafting			
Increasing Structural Job Resources	84	4.42	.60
Decreasing Hindering Job Demands 1	84	2.35	.95
Decreasing Hindering Job Demands 2	84	2.86	1.18
Increasing Social Job Resources	84	3.35	1.02
Increasing Challenging Job Demands	84	3.88	.74
Personality			
Extraversion	81	3.36	1.07
Agreeableness	81	3.69	.72
Conscientiousness	80	3.93	.74
Emotional Stability	79	3.82	.71
Openness to Experience	81	4.17	.65
Control Variables			
Age	80	33.65	9.43
Gender	80	1.45	.500
Income	65	83,830.77	79,691.12
Education	80	2.53	1.33
City Size	84	35,4420	37,1308

The first wave of data collection did not result in the desired sample size. Over 483 emails were sent to owners and operators of coworking spaces, 123 participant responses were collected, and 62 met inclusion criteria. The methodology described above was then used collect

contact information for the next 150 largest cities in the United States. Additionally, an analogous methodology was used to search for contact information for owners and operators of coworking spaces in the 50 states that were not found using the city based methodology. In the second wave of data collection, 138 emails were sent to owners and operators of coworking spaces, 37 participant responses were collected, and 22 met inclusion criteria. In total, 521 emails were sent to owners and operators of coworking spaces, 160 participant responses were collected, and 84 met inclusion criteria.

When the quantitative online survey data collection had concluded, qualitative data collection began. Participants who indicated during the quantitative data collection that they would be willing to sit for an interview were contacted via email. During the quantitative portion of the research, 44 participants indicated their willingness to be contacted about scheduling an interview, and a total of 19 interviews were scheduled and conducted.

Past industry surveys have been conducted without incentives, so the first wave of data collection in this study followed suit and was not incentivized. Given the small number of responses that resulted, participation in the second wave of data collection was incentivized with optional entry into a fifty-dollar raffle upon completion of the survey. During both waves of data collection, participants had the option to provide their email addresses in order to receive a summary of findings following the conclusion of the study. Additionally, participants were supplied a link to the website which presented the same findings summary to provide those who did not feel comfortable providing their contact information access to the results.

Qualitative Component

The present study included qualitative interviews composed of 14 open ended questions. See Appendix A for a list of the questions. At the end of the online survey, participants were

asked if they were willing to participate in a follow-up telephone interview lasting approximately 15 minutes. If so, they were asked to provide their email addresses and/or telephone numbers so they could be contacted by the researcher to schedule an interview. Interviews were scheduled by the lead graduate student researcher and were conducted by her, a psychology graduate student, and a senior undergraduate entering a psychology graduate program in the fall. A script was followed to ensure consistency across interviews.

In line with the grounded theory approach of Strauss and Corbin (1998), the open-ended questions administered during the interviews allowed participants to elaborate on the subjects addressed by the quantitative survey items as well as suggest areas that may warrant future investigation. The responses to the interview questions were used to address the research questions set forth in the proposed research.

Responses collected during the telephone interviews were coded for themes using an “open coding” approach within grounded theory, which focuses on identifying, categorizing, and describing phenomena found in the open responses (Strauss & Corbin, 1998). The open coding approach allows for multiple codes to be applied to a single response provided by a participant for a given question. Thus, percentages for the different themes identified within a given question may add up to over 100%. Open coding also allows for general themes within the responses to be categorized.

The qualitative coding was done by four individuals: the lead graduate student researcher, two psychology graduate students, and a senior undergraduate student. One of the graduate students and the senior undergraduate were those who had helped conduct interviews. The coders read the interview transcripts independently and took brief notes based on their reading and understanding of responses. Coders were instructed to read all questions across individual

participants and then read the interview transcripts focusing on one question at a time. The coders then met to discuss their perceptions of the interview responses and to develop coding scheme for each of the open-ended questions. This coding scheme was comprehensive and incorporated the coders' collective understanding of participant responses.

To ensure the coding scheme was complete, and to help standardize the coding process, the coders independently coded five randomly chosen interviews using the coding scheme and then met to discuss their initial coding. During this meeting, the coders revised the coding scheme to account for discrepancies or deficiencies in the initial coding scheme. The coders then independently applied the coding scheme to the remaining interviews, making modifications to their initial coding as needed. The coders then met to discuss the results of the coding process. When coder agreement for a particular response was not 100%, the coders discussed the response and application of codes until consensus was reached. Between three and sixteen codes were applied to each question. Consistent with an open coding approach, multiple codes could be applied to a single statement provided by a participant for any given question. Thus, for the different themes identified within a given question, percentages with which each code was endorsed may add to more than 100%.

Quantitative Component

The online survey contained quantitative items designed to assess the constructs outlined in this study as well as exploratory control variables. Additionally, demographic information about individuals and their coworking spaces was collected.

Quantitative Measures. The sections below describe the measures used in the online survey to collect the desired information.

Extent of coworking. Extent of coworking was measured two ways. First, participants reported the average number of hours they spent coworking per week ($M = 30.14$, $SD = 15.02$) and the average number of hours they spent working total per week ($M = 52.26$, $SD = 13.41$) so that the percentage of the workweek spent coworking ($M = .59$, $SD = 26.27$) could be calculated. This percentage form allowed for comparison across participants who work for different amounts of time (e.g., 40 vs. 60 hours). Second, participants reported the number of days per week they spent coworking ($M = 3.83$, $SD = 1.43$). Past research (e.g., Gajendran & Harrison, 2007; Fay & Kline, 2011) has measured extent of teleworking using similar metrics, with the scale introduced by Golden and Veiga (2005). Their analysis revealed no discernible difference between the two measures ($\rho = .95$), so they reported only hours per week in their analyses. In the present study, there was a significant correlation between the percentage of the workweek spent coworking and days per week spent coworking ($\rho = .77$), but they were not similar enough to be treated as interchangeable measures. Both were used for hypothesis testing in the present research.

Extent of other work arrangements. The extent of other work arrangements were measured and calculated in the same fashion. Participants reported the average number of hours they spent working from home per week ($M = 14.67$, $SD = 12.95$). The percentage of the workweek spent working from home ($M = .28$, $SD = 22.32$) was calculated. Participants reported the number of days per week they spent working from home ($M = 2.58$, $SD = 2.34$). There was a significant correlation between the percentage of the workweek spent working from home and days per week spent coworking ($\rho = .62$), but they were not similar enough to be treated as interchangeable measures.

Participants reported the average number of hours they spent working from a public space per week ($M = 2.80$, $SD = 3.75$). The percentage of the workweek spent working from a

public space ($M = .05$, $SD = 7.37$) was calculated. Participants reported the number of days per week they spent working from a public space ($M = .55$, $SD = .91$). There was a significant correlation between the percentage of the workweek spent working from a public space and days per week spent working from a public space ($\rho = .59$), but they were not similar enough to be treated as interchangeable measures.

Participants reported the average number of hours they spent working from the office of an organization or company ($M = 3.35$, $SD = 10.01$). The percentage of the workweek spent working from the office of an organization or company ($M = .06$, $SD = 17.157$) was calculated. Participants reported the number of days per week they spent working from the office of an organization or company ($M = 0.51$, $SD = 1.29$). There was a significant correlation between the percentage of the workweek spent working from the office of an organization or company and days per week spent working from the office of an organization or company ($\rho = .90$). They were treated as separate measures in the present research to be consistent with other measures.

Participants reported the average number of hours they spent working from other locations (e.g., while traveling or in transit) per week ($M = 2.55$, $SD = 5.60$). The percentage of the workweek spent working from other locations ($M = .04$, $SD = 9.73$) was calculated. Participants reported the number of days per week they spent working from other locations ($M = .46$, $SD = 1.11$). There was a significant correlation between the percentage of the workweek spent working from other locations and days per week spent working from other locations ($\rho = .81$), but they were not similar enough to be treated as interchangeable measures.

Work-family conflict. Work-family conflict was measured with eight items from Grzywacz and Marks (2000). Four of the items measured work-to-family conflict ($\alpha = .83$), and four of the items measured family-to-work conflict ($\alpha = .80$). Internal consistency in this study was

inline with previous studies (work-to-family conflict: $\alpha = .84$; $M = 2.87$, $SD = .73$; family-to-work conflict: $\alpha = .85$; $M = 2.30$, $SD = .73$). Responses for the items were on a 5-point frequency scale, where 1 corresponds to “Never” and 5 corresponds to “All of the time.” Sample items include “Stress at work makes you irritable at home,” and “Responsibilities at home reduce the effort you can devote to your job.” Higher scores indicate more work-to-family and more family-to-work conflict. See Appendix B for a complete list of items.

Job satisfaction. Job satisfaction was assessed using 18 items from Brayfield and Rothe (1951). This measure was chosen due in part to its lack of reference to supervisors, employing organizations, and other job aspects that may not pertain to all coworkers. The measure has shown adequate reliability in past research (Pillai, Schriesheim, & Williams, 1999; $\alpha = .89$) and did so in the present study ($\alpha = .91$; $M = 4.03$, $SD = .56$). A sample item is “I find real enjoyment in my work.” Responses for the items are on a 5-point Likert-type scale, where 1 corresponds to “Strongly disagree” and 5 corresponds to “Strongly agree.” Higher scores indicate more job satisfaction. All items can be found in Appendix C.

Life satisfaction. Life satisfaction was measured with five items developed by Diener and colleagues (1985). Past research with teleworkers demonstrated the reliability of this measure (Virick et al., 2010; $\alpha = .87$), and the present research with coworkers did as well ($\alpha = .84$; $M = 3.75$, $SD = .75$). Responses for the items are on a 5-point Likert-type scale, where 1 corresponds to “Strongly disagree” and 5 corresponds to “Strongly agree.” A sample item is “In most ways my life is close to my ideal.” Higher scores indicate more life satisfaction. Appendix D has the full list of items.

Job Performance. Participants were asked to rate their own job performance over the past week using five items from Abramis (1994). This measure has demonstrated acceptable levels of

reliability in past research (De Cuyper & De Witte, 2011; $\alpha = .91$). Internal consistency in this study was consistent with previous studies ($\alpha = .84$; $M = 4.24$, $SD = .55$). Responses for the items are on a 5-point Likert-type scale, where 1 corresponds to “Very poorly” and 5 corresponds to “Very well.” Higher scores indicate higher job performance. Appendix E has the full list of items.

Job crafting. Twenty-one items from Tims and colleagues (2012) were used to assess job crafting behavior. Exploratory factor analysis (i.e., principle components analysis) was performed to investigate the underlying structure of the scale. This was done because of the novelty of this measure in the organizational literature as well as this being the first known use of the scale in the United States and with coworkers.

In the original work done by Tims and colleagues (2012), the 21 items formed 4 subscales. Five items assessed increasing structural job resources ($\alpha = .84$), six items assessed decreasing hindering job demands ($\alpha = .72$), five items assessed increasing social job resources ($\alpha = .85$), and five items assessed increasing challenging job demands ($\alpha = .77$). In the present research, exploratory factor analysis initially revealed a six factor solution that explained 71.47% of the variance. Three items did not load strongly (i.e., factor loading of .6 or above) onto a single factor, and two subscales from the original research loaded onto two factors.

Communalities for five items fell outside of the ideal range of .4 to .8.

These many issues prompted the decision to use empirical and theoretical grounding to explore possible modifications to the model with the hope that removing one or more items might simplify and unify the model. After many iterations, four items were removed from the model. Three of these items did not load strongly on any one factor, no matter what other items were removed from the model. Removal of the fourth item improved reliability of the subscale

increasing social job resources (i.e., from .77 to .85). It also allowed the other four items from this scale to load onto a single factor, rather than two as they did originally. However, the subscale decreasing hindering job demands continued to load onto two factors. The items comprising these two-item factors have both semantic and conceptual similarities which may explain why they load together. The first set (i.e., “I make sure that my work is mentally less intense” and “I try to ensure that my work is emotionally less intense”) focus on the intensity of work and have similar sentence structure. The second set (i.e., “I manage my work so that I try to minimize contact with people whose problems affect me emotionally” and “I organize my work so as to minimize contact with people whose expectations are unrealistic”) focus on controlling work to minimizing contact with people who negatively impact the individual.

In the end, 17 of the original 21 items from Tims and colleagues (2012) were used to assess job crafting behavior. Exploratory factor analysis revealed a five factor model that explained 71.58% of the variance, which was slightly more than the original six factor model. Four items assessed increasing structural job resources ($\alpha = .85$; $M = 4.42$, $SD = .60$). An example item is “I try to develop myself professionally.” Two items assessed the first aspect of decreasing hindering job demands ($\alpha = .72$; $M = 2.35$, $SD = .95$), henceforth referred to as decreasing hindering job demands 1. An example item is “I try to ensure that my work is emotionally less intense.” Two items assessed the second aspect of decreasing hindering job demands ($\alpha = .85$; $M = 2.86$, $SD = 1.18$), henceforth referred to as decreasing hindering job demands 2. An example item is “I organize my work so as to minimize contact with people whose expectations are unrealistic.” Four items assessed increasing social job resources ($\alpha = .85$; $M = 3.35$, $SD = 1.02$). An example item is “I ask mentors to coach me.” Five items assessed increasing challenging job demands ($\alpha = .77$; $M = 3.88$, $SD = .74$). An example item is “When there is not much to do at

work, I see it as a chance to start new projects.” Participants responded on a five point Likert-type scale, where 1 corresponds to “Rarely” and 5 corresponds to “Most of the time,” indicating the frequency with which they engaged in different job crafting behaviors. See Appendix F for a complete list of items.

Personality. Ten items from Gosling and colleagues (2003) were used to assess five facets of personality, specifically extraversion ($\alpha = .68$), agreeableness ($\alpha = .40$), conscientiousness ($\alpha = .50$), emotional stability ($\alpha = .73$), and openness to experience ($\alpha = .45$). Given that two items measure each dimension, the unusually low reliability estimates are expected, as there is minimal content overlap between the items. The reliability of these scales in the present research was in line with this expectation (extraversion: $\alpha = .79$; $M = 3.36$, $SD = 1.07$; agreeableness: $\alpha = .16$; $M = 3.69$, $SD = .72$; conscientiousness: $\alpha = .51$; $M = 3.93$, $SD = .74$; emotional stability: $\alpha = .39$; $M = 3.81$, $SD = .71$; openness to experience: $\alpha = .39$; $M = 4.17$, $SD = .65$). Participants responded on a five point Likert-type scale, where 1 corresponds to “Strongly disagree” and 5 corresponds to “Strongly agree.” All items share the stem “I see myself as...” Example items are “Extraverted, enthusiastic” and “Conventional, uncreative” See Appendix G for a complete list of items.

Results

Qualitative Component

After qualitative coding was complete, the lead graduate student researcher worked to identify broader themes across the interview questions, using the theories discussed earlier in this proposal (i.e., job crafting and conservation of resources) as guides. Modal themes were determined. These steps were taken to provide the most accurate and complete representation of the responses given by participants for each interview question. In order to address the research questions set forth in this research, these themes were used to determine if teleworking is the proper anchor for coworking (Research Question 1) and if the definition and measure of extent of coworking in the present study capture the content domain (Research Question 2). The themes were assessed to determine if they aligned with the definitions and measures discussed in the proposal, or if they suggest that the definitions and measures are deficient or inaccurate. Below, themes are discussed in context of each of the two Research Questions 1 and 2. Please refer to Appendix H for more information about coding and themes for individual interview questions.

Assessing Research Question 1. Research Question 1 asked if teleworking provides a proper anchor for coworking, and overall, the qualitative data provide support this idea.

Coworking takes place in coworking spaces where individuals gather to work alongside each other, providing social support and resources to each other. Access to both social and structural resources is one of the key differentiators between coworking and teleworking. Respondents supported these assertions by talking about positive culture and community within their coworking spaces, as well as networking and collaboration, when asked to share generally about their coworking experiences (Interview Question 14). Responses to Interview Question 2a suggested that the space itself provides structural resources, such as desk space, internet, and

conference spaces, and responses to Interview Question 2b indicated that coworkers make use of these resources.

The qualitative data also support the claim made earlier in this paper that coworking, like teleworking, is a flexible work arrangement in which individuals exercise high levels of autonomy and self-direction as related to their work. Most respondents reported they were satisfied with the amount of time they coworked, with the flexibility of the arrangement cited as enabling them to engage in the appropriate amount (Interview Question 11a-b). Respondents also reported engaging in work arrangements in addition to coworking (Interview Question 12a-d) as was expected due to the flexibility of coworking. These work arrangements were pursued in support of work relationships and partnerships, out of convenience (i.e., when getting to the coworking space was not feasible), and when work was determined more appropriate or easier to complete elsewhere. Personal and family obligations often prompted respondents to work outside of coworking spaces.

Building on the impact of personal responsibilities on coworkers, respondents also reported some work-family conflict, as was expected based on past telecommuting research and proposed by the present research. About a quarter of respondents said their personal responsibilities affected their abilities to cowork successfully, with family obligations limiting the amount of time they spent coworking (Interview Question 8a-b). Similarly, about a quarter of respondents wanted to cowork more, but other (e.g., personal and family) responsibilities prevented them from doing so (Question 11a-b).

Respondents also reported engaging in resource driven behaviors. This supports the use of conservation of resources theory as an explanatory theory within this research as it is used within teleworking literature. As the theory describes, respondents pursued coworking in part to

gain and preserve resources to minimize stresses (Interview Questions 1a-b and 3-6a-b). In addition to increasing social and structural job resources (i.e., gaining and preserving resources), coworkers also described how coworking enabled them to decrease hindering demands (i.e., minimize stresses; Interview Questions 3-5a-b). More specific examples are provided in the next section.

As originally proposed, there are both similarities and differences in the arrangements of teleworking and coworking, and these differences are often rooted in circumstances that result from non-traditional work situations (e.g., coworker's need for private space or phone rooms to make calls as to avoid distracting or being distracted by other coworkers vs. teleworker's need for a private space or room to take calls to avoid distracting or being distracted by others at home). Thus, teleworking provides an appropriate foundation for investigative work to better understand coworking.

Assessing Research Question 2. Research Question 2 asked if the definition and measure of extent of coworking in the present study captures the content domain, and the qualitative data suggest that they do.

Participants indicated that they could decide how many days they wished to cowork (Question 11a-b), and how many days, if any, they wished to pursue other work arrangements (Question 12a-d). This suggests the conceptualization of extent of coworking is as flexible and fluid as proposed. For the few participants who reported that they had considered leaving coworking or their current space, it was because of logistics, cost, or desire for independent office (Question 13a-b), not due to lack of flexibility or access constraints introduced by the coworking space.

Additionally, two of the most prevalent themes observed in the qualitative data were increased access to and use of social and structural job resources of as a result of coworking. Respondents indicated that these job crafting behaviors were enabled by and performed within the context of coworking. This suggests that extent of coworking relates to the degree to which respondents engage in these job crafting behavior. More specifically, the desire to increase social and structural job resources led many respondents to begin coworking (Question 1). Respondents indicated that coworking space provided many opportunities for them to increase social and structural job resources (Question 2a) and they took advantage of these opportunities (Question 2b). These increased resources positively impacted respondents' work lives (Question 3a-b), personal lives (Question 6a-b), abilities to perform their jobs (Question 4a-b), and the way they performed their jobs (Question 5a-b). Together, these responses suggest that these job crafting behaviors relate to personal and professional outcomes, as proposed in the present research.

Respondents also reported decreased hindering job demands. This aligns with earlier statements that coworking addresses some of the shortcomings of other work arrangements and suggests that extent of coworking relates to this type of job crafting behavior. Respondents indicated that coworking positively impacted the way they performed their jobs (Question 5a-b) and their abilities to perform their jobs (Question 4a-b) through decreasing hindering demands. Specifically, respondents were able to transfer some or all of their work tasks to their coworking spaces, gain separation between their work and home lives, and maintain space to meet clients. Respondents also reported positive impacts on work life satisfaction through decreasing hindering job demands through better focus and fewer distractions during work, flexibility and mobility in their work, and separation between work and home (Question 3a-b). Some respondents did mention obstacles, primarily learning to handle disruptions, preventing

disruptions to others, and finding a coworking space that fits ones' needs and work style (Question 10a-b). Still, respondents indicated coworking, through job crafting, provided the benefits originally proposed by the present research.

Overall, participant responses suggest that extent of coworking as measured by days per week and percentage of working hours spent coworking are both appropriate measures. Participants overwhelmingly reported their ability to pick how many days and hours of their work weeks they spent coworking as well as their level of engagement in activities and behaviors that had characterized the definition of coworking. Although a minority of respondents mentioned particular features or shortcomings of their individual coworking spaces or work arrangements, the proposed definition and measure of extent of coworking captured the overall spirit and similarities shared across respondents and coworking spaces.

Quantitative Analyses

Regression analyses. Hypotheses 1a, 2a, 3a, 4a, and 5a were analyzed using linear regressions within SPSS 21. Hypothesis 1a stated that extent of coworking would be negatively related to work-to-family conflict. The data demonstrated a significant Pearson's correlation between work-to-family conflict and extent of coworking as measured by the percentage of the workweek spent coworking ($r = -.28, p < .05$) but not as measured by days per week spent coworking ($r = -.07, p > .05$). These inconsistent results provide partial support for Hypothesis 1a. They suggest that as the percentage of the workweek spent coworking increases, the level of work-to-family conflict decreases. However, days per week spent coworking does not appear to significantly impact levels of work-to-family conflict. These results also suggest potential measurement error associated with the measure used to capture extent of coworking. This will be further explored in the discussion section.

Hypothesis 2a stated that extent of coworking would be negatively related to family-to-work conflict. This hypothesis was not supported as there was no significant relationship between family-to-work conflict and extent of coworking as measured by the percentage of the workweek spent coworking ($r = -.01, p > .05$) or by days per week spent coworking ($r = -.03, p > .05$). This suggests that extent of coworking does not impact levels of family-to-work conflict.

Hypothesis 3a stated that extent of coworking would be positively related to job satisfaction. This hypothesis was not supported as there was no significant relationship between job satisfaction and extent of coworking as measured by the percentage of the workweek spent coworking ($r = .10, p > .05$) or by days per week spent coworking ($r = .11, p > .05$). This suggests extent of coworking does not affect levels of job satisfaction.

Hypothesis 4a stated that extent of coworking would be positively related to life satisfaction. This hypothesis was not supported as there was no significant relationship between life satisfaction and extent of coworking as measured by the percentage of the workweek spent coworking ($r = .08, p > .05$) or by days per week spent coworking ($r = -.05, p > .05$). This suggests extent of coworking does not impact levels of life satisfaction.

Hypothesis 5a stated that extent of coworking would be positively related to job performance. The data demonstrated a significant Pearson's correlation between job performance and extent of coworking as measured by the percentage of the workweek spent coworking ($r = .25, p < .05$) but not as measured by days per week spent coworking ($r = .10, p > .05$). These inconsistent results provide partial support for Hypothesis 5a. They suggest that as the percentage of the workweek spent coworking increases, the level of job performance increases. However, days per week spent coworking does not appear to significantly impact levels of job performance. As with Hypothesis 1, these results also suggest potential measurement error

associated with the measure used to capture extent of coworking. This will be further explored in the discussion section.

Mediation analyses. Hypotheses 1b, 2b, 3b, 4b, and 5b were analyzed using bootstrapping methodology (with bootstrap resamples of 5000) via a macro for SPSS developed by Preacher and Hayes (2008). The decision was made to use this methodology, rather than structural equation modeling (SEM), after data collection had ended, and it was determined that the sample size was not sufficient for SEM. Rule of thumb suggests a sample size of approximately 200 when conducting SEM analyses, and some suggest even more conservative sample sizes (e.g., Tanaka (1987) suggests 20 participants per free parameter; Bentler and Chou (1987) suggest five 20 participants per free parameter). The 84 participant sample in the present research feel short of all of these recommendations. Additionally, the Baron and Kenny (1986) causal steps methodology for testing the mediated relationships was considered for the present research, but this methodology has been called into question due to its limitations and assumptions (e.g., Hayes, 2009; Zhao, Lynch, & Chen). Therefore, it was determined that bootstrapping would be the most appropriate approach to conducting mediation analyses in the present research.

The statistical method of bootstrapping has three main advantages (Buffardi & Campbell, 2008). First, bootstrapping is a nonparametric resampling procedure, meaning no assumptions of normality are made (see MacKinnon, Lockwood, & Williams, 2004; Preacher & Hayes, 2004; Shrout & Bolger, 2002). Second, multiple mediators can be tested simultaneously. Third, the likelihood of Type 1 error is reduced because the number of inferential tests is minimized. These advantages help make this methodology appropriate for small samples sizes, as in the present research (Preacher & Hayes, 2008).

The Preacher and Hayes (2008) macro estimates path coefficients (i.e., direct and indirect effects) in a multiple mediator model and generates bootstrap confidence intervals for total and specific indirect effects of the independent variable on the dependent variable through each mediator variable. Confidence intervals that include zero suggest nonsignificant relationships. For each test of mediation, the personal or professional outcome of interest was entered as the dependent variable, extent of coworking was entered as the predictor variable, and the five facets of job crafting were entered as proposed mediators.

Hypothesis 1b stated that job crafting would partially mediate the relationship between the extent of coworking and work-to-family conflict. The analyses revealed that the total indirect effect (i.e., the difference between the total and direct effects) of extent of coworking as measured by days per week spent coworking on work-to-family conflict through the five mediators was not significant (point estimate = $-.03$; 95% BCa (bias-corrected and accelerated; see Efron, 1987) CI = $-.10/.02$), and that the total indirect effect of extent of coworking as measured by the percentage of the workweek spent coworking on work-to-family conflict through the five mediators was not significant (point estimate = $-.21$; 95% BCa CI = $-.56/.08$). Thus, the five facets of job crafting did not mediate the relationship between extent of coworking as measured by either operationalization of extent of coworking and work-to-family conflict. Overall, Hypothesis 1b was not supported. Job crafting does not appear to partially mediate the relationship between extent of coworking and work-to-family conflict. Please refer to Tables 2 and 3 for the total effects, direct effects, and specific indirect effects of each proposed mediator.

Table 2. Multiple Mediation of Indirect Effects of Extent of Coworking (Days) on Work-to-Family Conflict through Job Crafting

	Point Estimate	BCa 95% CI	
		Lower	Upper
Total Effects	-.04	---	---
Direct Effect of Coworking	.00	---	---
Indirect Effects			
Increasing structural job resources	.00	-.01	.03
Decreasing hindering job demands 1	.00	-.01	.03
Decreasing hindering job demands 2	-.03	-.09	.00
Increasing social job resources	.00	-.04	.01
Increasing challenging job demands	-.01	-.05	.01
Total Indirect Effect	-.03	-.10	.02

Note. N = 83. BCa = bias corrected and accelerated bootstrapping confidence intervals. Confidence intervals containing zero are interpreted as being not significant. *p < .05.

Table 3. Multiple Mediation of Indirect Effects of Extent of Coworking (%) on Work-to-Family Conflict through Job Crafting

	Point Estimate	BCa 95% CI	
		Lower	Upper
Total Effects	-.78*	---	---
Direct Effect of Coworking	-.57	---	---
Indirect Effects			
Increasing structural job resources	.04	-.02	.27
Decreasing hindering job demands 1	-.01	-.11	.06
Decreasing hindering job demands 2	-.13	-.44	.03
Increasing social job resources	-.03	-.25	.04
Increasing challenging job demands	-.09	-.34	.01
Total Indirect Effect	-.21	-.56	.08

Note. N = 83. BCa = bias corrected and accelerated bootstrapping confidence intervals. Confidence intervals containing zero are interpreted as being not significant. *p < .05.

Hypothesis 2b stated that job crafting would partially mediate the relationship between the extent of coworking and family-to-work conflict. The analyses also revealed that the total indirect effect of extent of coworking as measured by days per week spent coworking on family-to-work conflict through the five mediators was not significant (point estimate = .00; 95% BCa CI = -.05/.06) and that the total indirect effect of extent of coworking as measured by the percentage of the workweek spent coworking on family-to-work conflict through the five mediators was not significant (point estimate = -.06; 95% BCa CI = -.38/.22). Thus, the five

facets of job crafting did not mediate the relationship between extent of coworking as measured by either operationalization of extent of coworking and family-to-work conflict. Overall, Hypothesis 2b was not supported. Job crafting does not appear to partially mediate the relationship between extent of coworking and family-to-work conflict. Please refer to Tables 4 and 5 for the total effects, direct effects, and specific indirect effects of each proposed mediator.

Table 4. Multiple Mediation of Indirect Effects of Extent of Coworking (Days) on Family-to-Work Conflict through Job Crafting

	Point Estimate	BCa 95% CI	
		Lower	Upper
Total Effects	-.02	---	---
Direct Effect of Coworking	-.02	---	---
Indirect Effects			
Increasing structural job resources	.00	-.01	.02
Decreasing hindering job demands 1	.01	-.01	.02
Decreasing hindering job demands 2	-.01	-.01	.05
Increasing social job resources	.00	-.06	.02
Increasing challenging job demands	.00	-.01	.04
Total Indirect Effect	.00	-.05	.06

Note. N = 83. BCa = bias corrected and accelerated bootstrapping confidence intervals. Confidence intervals containing zero are interpreted as being not significant. *p < .05.

Table 5. Multiple Mediation of Indirect Effects of Extent of Coworking (%) on Family-to-Work Conflict through Job Crafting

	Point Estimate	BCa 95% CI	
		Lower	Upper
Total Effects	-.03	---	---
Direct Effects of Coworking	.01	---	---
Indirect Effects			
Increasing structural job resources	.01	-.04	.12
Decreasing hindering job demands 1	-.02	-.20	.07
Decreasing hindering job demands 2	-.10	-.41	.10
Increasing social job resources	.03	-.03	.25
Increasing challenging job demands	.02	-.05	.22
Total Indirect Effect	-.06	-.38	.23

Note. N = 83. BCa = bias corrected and accelerated bootstrapping confidence intervals. Confidence intervals containing zero are interpreted as being not significant. *p < .05.

Hypothesis 3b stated that job crafting would partially mediate the relationship between the extent of coworking and job satisfaction. The analyses revealed that the total indirect effect

of extent of coworking as measured by days per week spent coworking on job satisfaction through the five mediators was also not significant (point estimate = -.01; 95% BCa CI = -.05/.05) and that the total indirect effect of extent of coworking as measured by the percentage of the workweek spent coworking on job satisfaction through the five mediators was not significant (point estimate = -.18; 95% BCa CI = -.44/.12). Thus, the five aspects of job crafting did not mediate the relationship between extent of coworking as measured by either operationalization of extent of coworking and job satisfaction. Overall, Hypothesis 3b was not supported. Job crafting does not appear to partially mediate the relationship between extent of coworking and job satisfaction. Please refer to Tables 6 and 7 for the total effects, direct effects, and specific indirect effects of each proposed mediator.

Table 6. Multiple Mediation of Indirect Effects of Extent of Coworking (Days) on Job Satisfaction through Job Crafting

	Point Estimate	BCa 95% CI	
		Lower	Upper
Total Effects	.05	---	---
Direct Effects of Coworking	.05	---	---
Indirect Effects			
Increasing structural job resources	-.01	-.04	.02
Decreasing hindering job demands 1	.00	.00	.04
Decreasing hindering job demands 2	.00	-.04	.01
Increasing social job resources	.00	-.01	.01
Increasing challenging job demands	.00	-.01	.02
Total Indirect Effect	-.01	-.05	.05

Note. N = 84. BCa = bias corrected and accelerated bootstrapping confidence intervals. Confidence intervals containing zero are interpreted as being not significant. *p < .05.

Hypothesis 4b stated that job crafting would partially mediate the relationship between the extent of coworking and life satisfaction. The analyses revealed that the total indirect effect of extent of coworking as measured by days per week spent coworking on life satisfaction through the five mediators was also not significant (point estimate = -.01; 95% BCa CI = -.07/.05) and that the total indirect effect of extent of coworking as measured by the percentage of

the workweek spent coworking on life satisfaction through the five mediators was not significant (point estimate = -.21; 95% BCa CI = -.59/.11). Thus, the five aspects of job crafting did not mediate the relationship between extent of coworking as measured by either operationalization of extent of coworking and job satisfaction. Overall, Hypothesis 4b was not supported. Job crafting does not appear to partially mediate the relationship between extent of coworking and life satisfaction. Please refer to Tables 8 and 9 for the total effects, direct effects, and specific indirect effects of each proposed mediator.

Table 7. Multiple Mediation of Indirect Effects of Extent of Coworking (%) on Job Satisfaction through Job Crafting

	Point Estimate	BCa 95% CI	
		Lower	Upper
Total Effects	.22	---	---
Direct Effects of Coworking	.39	---	---
Indirect Effects			
Increasing structural job resources	-.08	-.33	.03
Decreasing hindering job demands 1	-.02	-.16	.06
Decreasing hindering job demands 2	-.07	-.27	.05
Increasing social job resources	.00	-.08	.04
Increasing challenging job demands	.00	-.10	.10
Total Indirect Effect	-.18	-.44	.12

Note. N = 84. BCa = bias corrected and accelerated bootstrapping confidence intervals. Confidence intervals containing zero are interpreted as being not significant. *p < .05.

Table 8. Multiple Mediation of Indirect Effects of Extent of Coworking (Days) on Life Satisfaction through Job Crafting

	Point Estimate	BCa 95% CI	
		Lower	Upper
Total Effects	-.03	---	---
Direct Effects of Coworking	-.02	---	---
Indirect Effects			
Increasing structural job resources	.00	-.03	.01
Decreasing hindering job demands 1	.01	-.01	.05
Decreasing hindering job demands 2	-.02	-.07	.01
Increasing social job resources	.00	-.01	.03
Increasing challenging job demands	.00	-.02	.03
Total Indirect Effect	-.01	-.07	.05

Note. N = 83. BCa = bias corrected and accelerated bootstrapping confidence intervals. Confidence intervals containing zero are interpreted as being not significant. *p < .05.

Table 9. Multiple Mediation of Indirect Effects of Extent of Coworking (%) on Life Satisfaction through Job Crafting

	Point Estimate	BCa 95% CI	
		Lower	Upper
Total Effects	.23	---	---
Direct Effects of Coworking	.43	---	---
Indirect Effects			
Increasing structural job resources	-.05	-.27	.03
Decreasing hindering job demands 1	-.01	-.18	.05
Decreasing hindering job demands 2	-.13	-.48	.04
Increasing social job resources	.00	-.09	.13
Increasing challenging job demands	-.02	-.20	.13
Total Indirect Effect	-.21	-.59	.11

Note. N = 83. BCa = bias corrected and accelerated bootstrapping confidence intervals. Confidence intervals containing zero are interpreted as being not significant. *p < .05.

Hypothesis 5b stated that job crafting would partially mediate the relationship between the extent of coworking and job performance. The analyses revealed that the total indirect effect of extent of coworking as measured by days per week spent coworking on job satisfaction through the five mediators was not significant (point estimate = .01; 95% BCa CI = -.02/.07) and that the total indirect effect of extent of coworking as measured by the percentage of the workweek spent coworking on job performance through the five mediators was not significant (point estimate = -.06; 95% BCa CI = -.26/.18). Thus, the five facets of job crafting did not mediate the relationship between extent of coworking as measured by either operationalization of extent of coworking and job performance. Overall, Hypothesis 5b was not supported. Job crafting does not appear to partially mediate the relationship between extent of coworking and job performance. Please refer to Tables 10 and 11 for the total effects, direct effects, and specific indirect effects of each proposed mediator.

Table 10. Multiple Mediation of Indirect Effects of Extent of Coworking (Days) on Job Performance through Job Crafting

	Point Estimate	BCa 95% CI	
		Lower	Upper
Total Effects	-.04	---	---
Direct Effects of Coworking	.03	---	---
Indirect Effects			
Increasing structural job resources	.00	-.03	.01
Decreasing hindering job demands 1	.01	-.01	.03
Decreasing hindering job demands 2	.00	-.01	.04
Increasing social job resources	.00	-.01	.02
Increasing challenging job demands	.00	-.01	.03
Total Indirect Effect	.01	-.02	.07

Note. N = 84. BCa = bias corrected and accelerated bootstrapping confidence intervals. Confidence intervals containing zero are interpreted as being not significant. *p < .05.

Table 11. Multiple Mediation of Indirect Effects of Extent of Coworking (%) on Job Performance through Job Crafting

	Point Estimate	BCa 95% CI	
		Lower	Upper
Total Effects	-.53*	---	---
Direct Effects of Coworking	.58*	---	---
Indirect Effects			
Increasing structural job resources	-.04	-.20	.03
Decreasing hindering job demands 1	.00	-.15	.04
Decreasing hindering job demands 2	-.01	-.16	.13
Increasing social job resources	.00	-.03	.11
Increasing challenging job demands	.00	-.07	.14
Total Indirect Effect	-.06	-.26	.18

Note. N = 84. BCa = bias corrected and accelerated bootstrapping confidence intervals. Confidence intervals containing zero are interpreted as being not significant. *p < .05.

Exploratory Analyses

Curvilinear Relationships. The linear relationships connecting extent of coworking to personal and professional outcomes that were originally proposed by the present research were not observed. However, as discussed earlier, some previous research has demonstrated that a curvilinear relationship exists between extent of telecommuting and some of the outcomes of interest in this study (i.e., job satisfaction, Virick et al., 2010, Golden, 2006, Golden & Veiga, 2005; life satisfaction, Virick et al., 2010). Therefore, some of the nonsignificant relationships

observed during hypothesis testing may have stemmed from non-linear relationships between extent of coworking and personal and professional outcomes.

To investigate this possibility, the two measures of extent of coworking were centered to zero and then squared to create quadratic terms (Cohen & Cohen, 1983; Miles & Shevlin, 2001). Then, for each outcome (i.e., dependent) variable, a polynomial regression analyses was run with the outcome variable as the dependent variable. In the first step, extent of coworking (i.e., the linear term) was entered, and in the second step, the quadratic term was entered. A significant change in R-square from Step 1 to Step 2 indicates a curvilinear effect. Result revealed no curvilinear relationships in the present data.

Linear and Mediated Relationships with Control Variables. In an effort to better understand the relationships between extent of coworking and the personal and professional outcomes of interest in the present study, the linear regression analyses used to test Hypotheses 1-5a and the mediation analyses conducted for Hypotheses 1-5b were rerun to include, separately, three sets of covariates: Personality, Work Arrangement, and Demographic Variables. For linear regression analyses, personal and professional outcomes were entered separately as dependent variables. In the first step, control variables were entered, and in the second step, extent of coworking was entered. For mediation analyses, bootstrap resamples of 5000 were used. Path coefficients were estimated, with all paths adjusted for the potential influence of covariates, and bootstrap confidence intervals were generated for total and specific indirect effects of the independent variable (i.e., extent of coworking) on the dependent variable (i.e., each personal and professional outcome) through each mediator variable (i.e., the five facets of job crafting). Confidence intervals that included zero suggest relationships that are not significant. The details of these analyses are discussed below.

Personality. As discussed earlier in this paper, there is reason to believe that personality may affect how extent of coworking relates to personal and professional outcomes. In the present study, personality was measured using ten items from Gosling, Rentfrow, and Swann (2003) and was conceptualized according to the Five Factor Model (“Big Five,” i.e., emotional stability, extraversion, openness, conscientiousness, and agreeableness). All five personality factors were entered as covariates in the regression analyses, and the results revealed the relationships extent of coworking as measured by percentage of the week spent coworking had with work-to-family conflict and job performance were significant when controlling for personality. The remaining results mirrored the original hypothesis testing. All five personality factors were entered as covariates in the mediation analyses, and results revealed no mediated relationships in the present data when controlling for personality.

Work Arrangements. There is also reason to believe that extent of work arrangements other than coworking (i.e., home, public, office, other) might affect how extent of coworking relates to personal and professional outcomes. In the present study, extent of work from home, public, office, and other spaces were all measured and calculated in the same way as extent of coworking. All four were entered as covariates in the analyses, with extent of the non-coworking work arrangements entered as percentage of hours per week or days per week to match the measure used for the extent of coworking variable in the analysis. Results of regression analyses revealed that the significant relationship between extent of coworking as measured by percentage of the week spent coworking and work-to-family conflict was no longer significant. The remaining results mirrored the original hypothesis testing. Results of mediation analyses revealed no mediated relationships in the present data when controlling for work arrangements.

Demographic Variables. Finally, demographic variables were thought to potentially impact how extent of coworking relates to personal and professional outcomes in the present research. Age, gender, annual household income, education level, and city size were all entered as control variables. Results of regression analyses revealed the relationship between extent of coworking as measured by percentage of the week spent coworking and job performance was significant when controlling for demographic variables. The remaining results mirrored the original hypothesis testing. Results revealed no mediated relationships in the present data when controlling for demographic variables.

Discussion

The present research endeavored to establish the construct extent of coworking within the organizational literature as well as understand the impact extent of coworking has for organizations and their employees through its influence on individuals' personal and professional outcomes. This mixed methodology research adds to limited academic and industry based research about coworking, and provides a foundation for further investigating coworking and the impact this work arrangement has on individuals' lives.

In the sections below, the purpose and major findings of the present study are summarized, and are followed by a discussion of the limitations of the study and directions for future research. Next, the practical and research implications of the study are explored, and finally, general conclusions are presented.

Extent of Coworking and Personal and Professional Outcomes

Although extent of telecommuting has been successfully used in past organizational literature to investigate the impact the work arrangement has on personal and professional outcomes, the analogous construct operationalizing extent of coworking in the present research was not as effective. Like past telecommuting research, the two measures employed to assess extent of coworking (i.e., percentage of work hours per workweek spent coworking and days per week spent coworking) were highly correlated, but unlike past telecommuting research, the two measures were not so highly correlated as to be used interchangeably. This may highlight a key difference between extent of telecommuting and extent of coworking. Whereas an individual who telecommutes on a particular day will likely spend the whole day telecommuting, an individual who coworks on a particular day may spend anywhere from a few hours to the whole work day in the coworking space, spending the other portion of the day working from home, at

client sites, or coffee shops. If behavior takes on this pattern, it follows that measuring days per week and percentage of work hours per workweek spent telecommuting would lead to almost synonymous measures, while employing analogous measures with coworking would lead to less robust correlation.

This pattern of relationship between the measures of extent of coworking also raises questions about what extent of coworking is necessary, if any, to experience positive effects on personal and professional outcomes. Extent of coworking as measured by the percentage of work hours per week spent coworking did relate negatively to work-to-family conflict and positively to job performance, suggesting that work-to-family conflict decreases and job performance increases as extent of coworking increases, but there was no significant relationships between this measure of extent of coworking and any other outcome. Similarly, extent of coworking as measured by the number of days per week spent coworking did not relate significantly to any outcome variables. Interestingly, the significant relationships extent of coworking as measured by the percentage of work hours per week spent coworking had with work-to-family conflict and job performance became nonsignificant when the extent of other work arrangements were controlled for. This further supports the idea that a simple measure of extent of coworking may not be enough to fully capture the complexities of this work arrangement. Thus, even though the qualitative data suggest that extent of coworking was properly conceptualized and measured, the quantitative data and analyses suggest that the two measures employed may be deficient or may need to be used in conjunction with other information to properly illustrate the relationships between coworking and personal and professional outcomes. It may also be the case that, like some past teleworking research (see Gajendran & Harrison, 2007 for a discussion), coworking should be treated as a dichotomous (i.e., coworker or not coworker) variable. It may be that any

extent of coworking will have the positive impact proposed by the present research, rather than increased levels of impact at greater extents of coworking.

Job Crafting

Coworking has been defined in this research as a non-traditional work arrangement in which individuals work in a shared office space that promotes collaboration and community among members. Increased social and structural resources were recurrent themes in participant responses in the qualitative portion of this research. Participants also discussed how coworking allowed them to decrease hindering job demands. Interestingly, respondents did not mention increasing challenging job demands, the fourth dimension of job crafting. This may indicate that coworking does not enable this form of job crafting directly, or that this type of job crafting is not easy to report explicitly. Overall, these responses lend support to the accuracy of the above definition of coworking and to the use of job crafting as an explanatory theory within this research. Participants indicated that coworking provided opportunities for increasing resources and decreasing demands, and that this overwhelming led to positive impacts on personal and professional outcomes. These reports align with conservation of resources theory and provide support for it as an explanatory mechanism in the present research.

However, the quantitative data did not provide support for job crafting as an explanatory mechanism for the link between extent of coworking and personal and professional outcomes. Contrary to hypotheses, job crafting did not partially mediate any of the relationships between extent of coworking and personal and professional outcomes. This was true even when control variables (i.e., personality, work arrangement, and demographic variables) were entered into the model.

These results may be interpreted a couple ways. First, these null results may indicate that job crafting may not be the means by which extent of coworking impacts personal and professional outcomes. However, respondents reported in the qualitative portion of this research that coworking provided them with opportunities to increase structural and social resources as well as decrease challenging job demands. Together, these opportunities led to positive impacts on work and home lives, contradicting the idea that job crafting is not a mechanism by which extent of coworking impacts outcomes.

Additionally, the absence of relationships between extent of coworking and outcomes of interest in the present study points towards a second explanation. That is, the results might be explained by measurement issues, namely inappropriate or deficient measures. As noted above, the job crafting measure employed in the present research is relatively new to the literature and was developed outside of the US. Although highly face valid, the present study is the first known use of this measure with an Americans and with coworkers. The results in the present study raise questions about whether use of this job crafting scale is appropriate with Americans or coworkers.

Nielsen and Abildgaard (2012) worked to develop and validate of a job crafting measure for use with blue-collar workers, based on the measure used in the present research (Tims, Bakker, & Derks, 2012). As in the present study, they discovered five dimensions of job crafting, rather than the four proposed by Tims, Bakker, and Derks (2012). Specifically, they identified increasing challenging demands, decreasing social job demands, increasing social job resources, increasing quantitative demands, and decreasing hindering job demands. Similar to the present study, they found two factors that explained the decrease of demands as well as a factor relating to increasing quantitative demands. In sum, this work by Nielsen and Abildgaard (2012)

demonstrates issues similar to the present study when introducing the Tims, Bakker, and Derks's (2012) job crafting measure with a novel population. This may indicate a deficiency in the original measure for use with populations that are not Dutch or white-collar workers with traditional work arrangements.

The other measures employed in this research were also developed with traditional work arrangements in mind. Although steps were taken to find measures appropriate for the coworking population being studied (e.g., lacking references to managers and traditional coworkers), these measures had not been used with coworkers before, and there were no equivalent or similar measures that had been. The present research suggests that scale development and/or validation for use with coworkers may be an important step in better understanding this work arrangement and the impact it has on personal and professional outcomes.

Limitations and Future Directions

The present research attempted to establish and explore extent of coworking within the context of the organization literature, and as such, this work provides a foundation for future investigations, primarily through the many limitations of the investigation. Common method bias is one limitation in the present study, given that measures are purely self-report. In part, these measures were used because some of the outcomes of interest were perception based (i.e., life and job satisfaction) or because no objective or second-party measure exists (i.e., job crafting). Additionally, given the population of study, it would have been difficult to standardize an outside rating for many of these metrics. Many participants in the sample were entrepreneurs or freelancers, meaning they often had no manager or coworkers to provide ratings. Client ratings may have been substituted, but past research indicates these would not be equivalent measures (e.g., Bozeman, 1997; Kozlowski, & Hattrup, 1992). Future research may try to identify

appropriate objective measures for use with coworkers in order to assess the accuracy of the subjective measures used.

Additionally, as mentioned in the discussion section, the measures used in the present study were not developed or validated with coworkers or, in some cases, Americans. There is reason to believe that these measures may operate differently with coworkers than the general population of fulltime employees. Future research should look to validate and modify these scales, as necessary, to properly measure the phenomena of interest. The quantitative measure of job crafting was particular problematic, but is also a first attempt at creating a quantitative scale to measure job crafting (Tims, Bakker, & Derk, 2012). The present research suggests the need for further work to refine this scale for use in the US with coworkers. Additionally, work by Tims, Bakker, and Derks in 2013 demonstrated significant correlations between three dimensions of job crafting (i.e., increasing social job resource, increasing structural job resources, and increasing challenging job demands) and job satisfaction, as well as other measures of wellbeing, but found no significant relationships for the fourth dimension of job crafting (i.e., decreasing hindering job demands). Again, this suggests that further work needs to be done to refine the job crafting scale introduced by Tims, Bakker, and Derk (2012).

Sample size was another issue in the present research. Although participants came from across the US, given the large number of coworking spaces contacted, the number of responses received was disappointing. This prevented analyses comparing subgroups of the sample, dividing by variables such as state, coworking space, or employment status. Given the primarily null findings in the present research, such analyses may have provided additional insight into the proposed relationships that would have enabled stronger conclusions to be drawn.

The limited number of responses was likely a result of the indirect method of participant recruitment employed by the present study, which relied on owners and operators of coworking spaces to contact coworkers, rather than contacting coworkers directly. This methodology was undertaken in an effort to reach a diverse and representative audience of coworkers, but instead, proved cumbersome and may have led to the limited number of responses received. Past industry research recruited participants through ads on online websites focused on coworking as well as reaching out to spaces directly, like in the present research. Future research should consider participant recruitment methodologies that balance these direct and indirect approaches to obtain both a diverse and adequate sized sample.

Future work may also look to extend the qualitative methodology employed in the present study. Participants who were interviewed were eager to share their coworking stories and experiences. Future research may wish to continue these conversations to better understand coworking and its relationship to personal and professional lives. Focus groups with coworkers or space owners might also encourage better understanding of coworking and how individuals engage in this work arrangement.

Future work may also look to study coworking in context of other work arrangements. Given the similarities coworking has to both teleworking and traditional office arrangements, future research may find success in paired samples methodologies. Coworkers, teleworkers, and traditional office workers from the same company may not be a feasible sample, but controlling for important variables like type of work being performed may help provide additional insights into the impacts of coworking. Future research may also wish to investigate coworking within the context of freelancing and entrepreneurship. Over half (55%) of the participants in the present study considered themselves entrepreneurs, and forty percent indicated they were

freelancers. Research focused on these employee populations has also been limited within the organizational literature. The present research calls for a need to better understanding these non-traditional worker populations and arrangements as well as the impact they have on individuals and organizations.

Research and Practical Implications

Coworking is growing in popularity, yet this emerging, innovative work arrangement has not been well explored in the organizational literature. In an attempt to fill this gap, the present study introduced and defined the construct extent of coworking through a qualitative literature review. The review drew on what was known about teleworking to establish content validity for extent of coworking within the framework of an existing literature. The qualitative methodology of telephone interviews was used to evaluate this proposed definition. Although this work raised as many questions as it answered, it helps to enrich and expand the alternative work arrangement literature. It also indicates the need for further research to better understand the work arrangement of coworking.

The present research is also an initial step towards understanding how extent of coworking relates to personal and professional outcomes important to employees and employers, specifically work-family conflict, job satisfaction, life satisfaction, and job performance. Quantitative methods, informed by job crafting and conservation of resources theory, were used to establish construct validity for a nomological network of the extent of coworking construct. Unfortunately, the present research provides minimal support for the positive impact coworking may have on individuals' lives, but it suggests a need for development of appropriate measures for use with coworkers and it helps establish a foundation for future research to continue to explore these relationships.

Better understanding of these relationships is important for both employees and organizations given a number of work-related trends that have increased prevalence of and need for flexible work arrangements (SHRM, 2011). Many workers are returning to the workforce after initially retiring, and many are pursuing bridge employment between the end of their careers and the beginning of retirement. Coworking may enable these individuals to continue working while beginning to exercise the flexibility provided by full retirement.

The present research also extends the recently introduced quantitative measure of job crafting developed by Tims and colleagues (2012) to the United States. The scale was developed and validated in The Netherlands, and the present work is a first step at utilizing this scale with an American audience. Prior to the development of the measure, job crafting had been measured through qualitative methodologies and used primarily as a theoretical lens for interpreting employee behavior. The present work continues the work of quantifying job crafting to better understand the job crafting performed by coworkers and how job crafting impacts personal and professional outcomes. Although the present research experienced issues when using the Tims and colleagues (2012) job crafting measure, it adds to the limited research that has used this measure and help establish a base from which to modify the measure for use with the American coworking population.

The present research also explores areas of organization literature that have not been well defined in the past. Life satisfaction has received little attention in past teleworking and flexible work arrangement literature (e.g., Gajendran, & Harrison, 2007). Although no significant relationships were found between extent of coworking with life satisfaction in quantitative analyses, the qualitative interviews suggested coworking positively impacted participants lives.

Thus, the present research is a step towards better understand how coworking and other flexible work arrangements affect employees' satisfaction with their lives more generally.

The present research also provides limited support for coworking as an option to help some professionals who struggle to balance their work and family demands. By choosing a coworking space close to home, near a child's day care or elderly an parent's nursing home, or that offers other desired amenities, individuals may be able to optimize their time both in and outside of work. Entrepreneurs can enjoy their independence at work but avoid feeling isolated. Coworking may provide an alternative arrangement that may allow employees to enjoy the benefits, and avoid the problems, of both traditional office and telecommuting arrangements. As Virick and colleagues (2010) point out, teleworking and other flexible work programs are not necessarily one size fits all, and coworking may help to accommodate those looking for a better fitting arrangement.

Better understanding of coworking is important as alternative work arrangements become more common and better exercised for the benefits they can confer to employees (SHRM, 2011). At a time when many industries face challenging economic circumstances and are struggling with transfer of institutional knowledge between older and younger employees, attracting and retaining employees is important. Many organizations are looking for alternatives to traditional monetary compensation and incentives. Coworking may provide an affordable alternative that can accommodate employees' other responsibilities and interests, like young children, aging parents, or engrossing hobbies.

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Appendix A

Qualitative Open-Ended Interview Questions

1. Briefly tell me about what led to your interest in and prompted you to begin coworking.
- 2a. What amenities, services, and/or opportunities does your coworking space offer?
- 2b. Do you take advantage of any of these offerings?
- 2c. Is there anything else you would like to see offered?
- 3a. Has coworking affected your satisfaction with your work life?
- 3b. If yes, how?
- 4a. Has coworking affected your ability to perform your job?
- 4b. If yes, how?
- 5a. Has coworking affected the way you perform your job, or has the way you perform your job changed since you began coworking?
- 5b. If yes, how?
- 6a. Has coworking affected your satisfaction with your personal life?
- 6b. If yes, how?
- 7a. Has coworking affected your ability to fulfill responsibilities at home, with your family, or with your friends?
- 7b. If yes, how?
- 8a. Have your personal responsibilities (i.e., at home, with your family, or with your friends) affected your ability to cowork successfully?
- 8b. If yes, how?
- 9a. Have your personal responsibilities (i.e., at home, with your family, or with your friends) affected your ability to perform your job successfully?
- 9b. If yes, how?
- 10a. Has anything else affected your ability to cowork successfully?
- 10b. If so, what?
- 11a. Are you satisfied with the amount of time you currently spend coworking?
- 11b. Why, or why not?
- 11c. Would you like to cowork more or less?
- 12a. Do you engage in any work arrangements other than coworking (i.e., working from home, working from my company's office)?
- 11b. If so, what arrangements?
- 11c. How often?
- 11d. Why?
- 12a. Have you considered leaving your coworking space or coworking in general to pursue another work arrangement?
- 12b. If yes, please elaborate on what arrangement and why.
13. Does coworking affect you in any other way not discussed above or is there anything else you would like to share about your experience with coworking?

Appendix B
Work-Family Conflict Frequency Measure

Instructions: How often have you experienced each of the following in the past year?

1. Your job makes you feel too tired to do the things that need attention at home.
2. Stress at work makes you irritable at home.
3. Job worries or problems distract you when you are at home.
4. Your job reduces the effort you can give to activities at home.
5. Personal or family worries and problems distract you when you are at work.
6. Stress at home makes you irritable at work.
7. Activities and chores at home prevent you from getting the amount of sleep you need to do your job well.
8. Responsibilities at home reduce the effort you can devote to your job.

Scale: 1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Most of the time, 5 = All of the time

Work-to-Family Subscale: Items 1, 2, 3, and 4

Family-to-Work Subscale: Items 5, 6, 7, and 8

Appendix C

Job Satisfaction Measure

Instructions: Please indicate your level of agreement with each statement as it describes how you feel about your present job.

1. My job is like a hobby to me.
2. My job is usually interesting enough to keep me from getting bored.
3. It seems that my friends are more interested in their jobs. (R)
4. I consider my job rather unpleasant. (R)
5. I enjoy my work more than my leisure time.
6. I am often bored with my job. (R)
7. I feel fairly well satisfied with my present job.
8. Most of the time I have to force myself to go to work. (R)
9. I am satisfied with my job for the time being.
10. I feel that my job is no more interesting than others I could get. (R)
11. I definitely dislike my work. (R)
12. I feel that I am happier in my work than most other people.
13. Most days I am enthusiastic about my work.
14. Each day of work seems like it will never end. (R)
15. I like my job better than the average worker does.
16. My job is pretty uninteresting. (R)
17. I find real enjoyment in my work.
18. I am disappointed that I ever took this job. (R)

Scale: 1 = Strongly disagree, 2 = Disagree, 3 = Undecided, 4 = Agree, 5 = Strongly agree

Appendix D
Life Satisfaction Measure

Instructions: Below are five statements with which you may agree or disagree. Using the scale below, please indicate your level of agreement with each item.

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

Scale: 1 = Strongly disagree, 2 = Disagree, 3 = Undecided, 4 = Agree, 5 = Strongly agree

Appendix E

Job Performance Measure

Instructions: In your own judgment, how well did you fulfill the following task during the last seven days / week you worked?

1. Handle the daily demands of your work
2. Take up responsibilities
3. Make the right decisions
4. Perform your work without mistakes
5. Finish things on time / meet deadlines

Scale: 1 = Very poorly, 2 = Poorly, 3 = Undecided, 4 = Well, 5 = Very well

Appendix F Job Crafting Measure

Instructions: Using the scale below, please indicate how frequently you engage in the following behaviors.

1. I try to develop my capabilities
2. I try to develop myself professionally
3. I try to learn new things at work
4. *I make sure that I use my capacities to the fullest*
5. I decide on my own how I do things
6. I make sure that my work is mentally less intense
7. I try to ensure that my work is emotionally less intense
8. I manage my work so that I try to minimize contact with people whose problems affect me emotionally
9. I organize my work so as to minimize contact with people whose expectations are unrealistic
10. *I try to ensure that I do not have to make many difficult decisions at work*
11. *I organize my work in such a way to make sure that I do not have to concentrate for too long a period at once*
12. I ask mentors to coach me
13. I ask whether colleagues are satisfied with my work
14. I look to mentors for inspiration
15. I ask others for feedback on my job performance
16. *I ask colleagues for advice*
17. When an interesting project comes along, I offer myself proactively as project co-worker
18. If there are new developments, I am one of the first to learn about them and try them out
19. When there is not much to do at work, I see it as a chance to start new projects
20. I regularly take on extra tasks even though I do not receive extra salary for them
21. I try to make my work more challenging by examining the underlying relationships between aspects of my job

Scale: 1 = Rarely, 2 = Occasionally, 3 = Sometimes, 4 = Often, 5 = Most of the time
Italicized items were deleted to arrive at the structure used for hypothesis testing.

Original Structure Determined by Tims and colleagues (2012)

Increasing Structural Job Resources Scale: Items 1, 2, 3, 4, 5

Decreasing Hindering Job Demands Scale: Items 6, 7, 8, 9, 10, 11

Increasing Social Job Resources Scale: Items 12, 13, 14, 15, 16

Increasing Challenging Job Demands Scale: Items 17, 18, 19, 20, 21

Structure Used to Test Hypotheses

Increasing Structural Job Resources Scale: Items 1, 2, 3, 5

Decreasing Hindering Job Demands 1 Scale: Items 6, 7

Decreasing Hindering Job Demands 2 Scale: Items 8, 9

Increasing Social Job Resources Scale: Items 12, 13, 14, 15

Increasing Challenging Job Demands Scale: Items 17, 18, 19, 20, 21

Appendix G

Personality Measure

Instructions: Here are a number of personality traits that may or may not apply to you. Please rate the extent to which the pair of traits applies to you, even if one characteristic applies more strongly than the other.

I see myself as:

1. Extraverted, enthusiastic.
2. Critical, quarrelsome.
3. Dependable, self-disciplined.
4. Anxious, easily upset.
5. Open to new experiences, complex.
6. Reserved, quiet.
7. Sympathetic, warm.
8. Disorganized, careless.
9. Calm, emotionally stable.
10. Conventional, uncreative.

Scale: 1 = Strongly disagree, 2 = Disagree, 3 = Undecided, 4 = Agree, 5 = Strongly agree

Extraversion Scale: Items 1, 6R

Agreeableness Scale: Items 2R, 7

Conscientiousness Scale: Items 3, 8R

Emotional Stability Scale: Items 4R, 9

Openness to Experiences Scale: Items 5, 10R

Appendix H
Coding and Themes for Qualitative Interview Questions

Interview Question 1

Briefly tell me about what led to your interest in and prompted you to begin coworking.	Percentage
Increasing social job resources	
Social support and networking opportunities	42.11%
Increasing structural job resources	
Needed professional space (to meet with clients)	36.84%
Structure while working remotely or independently	36.84%
Alternative to getting standard office	15.79%
Desire to reduce family-to-work conflict	
Take work out of home (and escape distractions)	26.32%
Began work for company in coworking space	
Began working for a coworking space or company already in space	21.05%

Note. 34 responses from 19 respondents; M = 1.79, SD = .92.

Interview Question 2a

What amenities, services, and/or opportunities does your coworking space offer?	Percentage
Access to structural job resources	
“Standard” office amenities (e.g., internet, printing, copying, faxing, restroom facilities)	78.95%
Conference rooms	57.89%
Kitchenette	36.84%
Learning and educational events	26.32%
Choice of office, desk, and seating types	26.32%
Personal desk / storage space	15.79%
Flexible hours	10.53%
Virtual office services (i.e. receive mail and/or phone calls)	10.53%
All inclusive	10.53%
IT / tech support available for purchase (e.g., help with web presence)	5.26%
Specialized tools and equipment (e.g., 3D printer)	5.26%
Access to social job resources	
Social and networking events	31.58%
Supportive coworkers	26.32%
Access to potential clients	5.26%

Note. 66 responses from 19 respondents; M = 3.47, SD = 1.68.

Interview Question 2b

Do you take advantage of these offerings?	Percentage
Access to structural job resources	
“Standard” office amenities (e.g., internet, printing, copying, faxing, restroom facilities)	89.47%
Conference rooms	52.63%
Kitchenette	47.37%
Choice of office, desk, and seating types	26.32%
Learning and educational events	15.79%
Personal desk / storage space	15.79%
Flexible hours	5.26%
Specialized tools/equipment	5.26%
All inclusive	5.26%
Access to social job resources	
Social and networking events	26.32%
Supportive coworkers	26.32%
Access to potential clients	5.26%

Note. 61 responses from 19 respondents; M = 3.21, SD = 1.40.

Interview Question 2c

Is there anything else you would like to see offered?	Percentage
Nothing; happy with current offerings	
Nothing; happy with current offerings	26.32%
Services and features to increase structural job resources	
More private space / space for phone calls	21.05%
Additional office, desk, and seating types (e.g., independent desk, private offices, etc.)	10.53%
Additional / larger conference space	10.53%
Background white noise	5.26%
More desks	5.26%
Better definition of space	5.26%
Services and features to decrease hinder job demands	
Extended hours (i.e., late night and weekends)	10.53%
Expanded office services (i.e., faxing, more printing, etc.)	5.26%
Address parking concerns (i.e., amount, lighting, etc.)	5.26%
Additional learning and educational opportunities	5.26%
Directory of members	5.26%
Location change	5.26%
Additional networking opportunities	5.26%

Note. 24 responses from 19 respondents; M = 1.26, SD = .56.

Interview Question 3a

Has coworking affected your satisfaction with your work life?	Percentage
Yes, Positive	94.74%
No	5.26%
Yes, Negative	0.00%

Interview Question 3b

If yes, how?	Percentage
Increased social job resources	
Social connections and support	38.89%
Exchange of ideas	16.67%
Share and receive feedback	11.11%
Part of coworking space community	11.11%
Collaboration	5.56%
Decreased hindering job demands	
Flexibility / mobility in work	22.22%
Better focus / fewer distractions	22.22%
Separation between work and home	16.67%
Increased social job resources	
Nice environment	11.11%
Way to find work	11.11%

Note. 30 responses from 19 respondents; M = 1.71, SD = 1.14.

Interview Question 4a

Has coworking affected your ability to perform your job?	Percentage
Yes, Positive	78.95%
No	21.05%
Yes, Negative	0.00%

Interview Question 4b

If yes, how?	Percentage
Increased social job resources	
Access to resources via other coworkers	26.67%
Exchange advice and feedback	20.00%
Enhanced social opportunities	20.00%
Professional networking opportunities	20.00%
Opportunities for collaboration	13.33%
Increased structural job resources	
Increased productivity and efficiency	13.33%
Flexibility and mobility	13.33%
Better focus / fewer distractions	6.67%
Decreased hindering job demands	
Space to meet with clients	13.33%
Transferring some or all work tasks to coworking space	13.33%
Better infrastructure and resources	6.67%
Separation between work and home	6.67%

Note. 26 responses from 15 respondents; M = 1.73, SD = .96.

Interview Question 5a

Has coworking affected the way you perform your job, or has the way you perform your job changed since you began coworking?	Percentage
Yes, Positive	73.68%
No	47.37%
Yes, Negative	5.26%

Interview Question 5b

If yes, how?	Percentage
Increased social job resources	
Access to resources via other coworkers	21.43%
Professional networking opportunities	21.43%
Opportunities for collaboration	14.29%
Enhanced social opportunities	7.14%
Increased structural job resources	
Increased productivity and efficiency	35.71%
Better infrastructure and resources	21.43%
Flexibility and mobility	14.29%
Disruptions in the coworking space	7.14%
Decreased hindering job demands	
Transferring some or all work tasks to coworking space	21.43%
Separation between work and home	7.14%
Space to meet with clients	7.14%
Structure for daily work activities	7.14%

Note. 26 responses from 14 respondents; M = 1.86, SD = .86.

Interview Question 6a

Has coworking affected your satisfaction with your personal life?	Percentage
Yes, Positive	84.21%
No	15.79%
Yes, Negative	5.26%

Interview Question 6b

If yes, how?	Percentage
Community and culture increase social job resources	
Enhanced social network	56.25%
Enjoy coworking culture / coworking fits work style	18.75%
Share and receive feedback and advice	12.50%
Improves work life positively impacts personal life	
Separation between work and home	31.25%
Decreased distractions / interference	6.25%

Note. 20 responses from 16 respondents; $M = 1.25$, $SD = .45$.

Interview Question 7a

Has coworking affected your ability to fulfill responsibilities at home, with your family, or with your friends?	Percentage
No	57.89%
Yes, Positive	42.11%
Yes, Negative	5.26%

Interview Question 7b

If yes, how?	Percentage
Improved personal life	
Enhanced home life	62.50%
Increased ability to fulfill personal responsibilities	37.50%
Meeting social and psychological needs	
Retain employees	12.50%
Resources for family needs (i.e., space to hold events)	12.50%
Time commuting	12.50%

Note. 11 responses from 8 respondents; $M = 1.38$, $SD = .74$.

Interview Question 8a

Have your personal responsibilities (i.e., at home, with your family, or with your friends) affected your ability to cowork successfully?	Percentage
No	78.95%
Yes, Negative	21.05%
Yes, Positive	0.00%

Interview Question 8b

If yes, how?	Percentage
Work-family conflict	
Family obligations limit time spent coworking	25.00%
Difficulty transitioning between offices	50.00%
Choose to spend more time at home / with family	25.00%

Note. 4 responses from 4 respondents; M = 1.00, SD = 1.00.

Interview Question 9a

Have your personal responsibilities (i.e., at home, with your family, or with your friends) affected your ability to perform your job successfully?	Percentage
No	89.47%
Yes, Negative	10.53%
Yes, Positive	0.00%

Interview Question 9b

If yes, how?	Percentage
Family responsibilities impact ability to work	100.00%
Parental responsibilities	50.00%
Family obligations limit time spent working	50.00%

Note. 4 responses from 2 respondents; M = 2.00, SD = .00.

Interview Question 10a

Has anything else affected your ability to cowork successfully?	Percentage
No	63.16%
Yes, Negative	36.84%
Yes, Positive	10.53%

Interview Question 10b

If so, what?	Percentage
Decreasing hindering job demands by creating space to focus on work	
Handling interruptions, distractions, and noise	42.86%
Finding a space that fits your needs / personality	42.86%
Handling phone calls in a largely open space (i.e., not distracting others)	28.57%
Amount of time networking / socializing	14.29%

Note. 9 responses from 7 respondents; M = 1.29, SD = .50.

Interview Question 11a

Are you satisfied with the amount of time you currently spend coworking?	Percentage
Yes	73.68%
No	26.32%

Interview Question 11b

Why, or why not?	Percentage
Flexibility; can cowork as much or little as desired	50.00%
Other things get in the way	30.00%
Too many other responsibilities	30.00%

Note. 11 responses from 10 respondents; M = 1.10, SD = .32.

Interview Question 11c

Would you like cowork more or less?	Percentage
More	80.00%
Less	20.00%

Interview Question 12a

Do you engage in any work arrangements other than coworking (i.e., working from home, working from your company's office)?	Percentage
Yes	84.21%
No	15.79%

Interview Question 12b

If so, what arrangements?	Percentage
Work from home	56.25%
Onsite with clients	31.25%
Other office space	18.75%
Coffee shops	18.75%
Off-site meetings and lunches	12.50%
Varies	12.50%

Note. 24 responses from 16 respondents; M = 1.50, SD = .63.

Interview Question 12c

How often?	Percentage
Regularly (i.e., at least once a week)	64.29%
Occasionally / irregularly	21.43%
Semi-regularly (i.e., at least once a month)	14.29%

Interview Question 12d

Why?	Percentage
Work-related relationships and partnerships	30.77%
Convenience	23.08%
Nature of work requires it	23.08%
Focused work / minimize disruptions	15.38%
Change of scenery	15.38%
Family / personal obligations	15.38%
Not always able to get to space	15.38%

Note. 18 responses from 13 respondents; M = 1.38, SD = .65.

Interview Question 13a

Have you considered leaving your coworking space or coworking in general to pursue another work arrangement?	Percentage
No	63.16%
Yes	36.84%

Interview Question 13b

If yes, please elaborate on what arrangement and why.	Percentage
Cost	42.86%
Independent office	42.86%
Logistics / transportation	14.29%
Switching locations	14.29%

Note. 8 responses from 7 respondents; M = 1.14, SD = .38.

Interview Question 14

Does coworking affect you in any other way not discussed above, or is there anything else you would like to share about your experience with coworking?	Percentage
Positive comments on coworking culture	73.68%
Cultivating positive culture and community / setting expectations	36.84%
Networking	26.32%
Good value	21.05%
Collaboration	10.53%
Not enough privacy	5.26%

Note. 33 responses from 19 respondents; M = 1.74, SD = .73.

Appendix I Institutional Review Board Approval

Application for Exemption from Institutional Oversight



Institutional Review Board
Dr. Robert Mathews, Chair
131 David Boyd Hall
Baton Rouge, LA 70803
P: 225.578.8692
F: 225.578.5983
irb@lsu.edu
lsu.edu/irb

Unless qualified as meeting the specific criteria for exemption from Institutional Review Board (IRB) oversight, ALL LSU research/ projects using living humans as subjects, or samples, or data obtained from humans, directly or indirectly, with or without their consent, must be approved or exempted in advance by the LSU IRB. This Form helps the PI determine if a project may be exempted, and is used to request an exemption.

-- Applicant, Please fill out the application in its entirety and include the completed application as well as parts A-F, listed below, when submitting to the IRB. Once the application is completed, please the completed application to the IRB Office or to a member of the Human Subjects Screening Committee. Members of this committee can be found at <http://research.lsu.edu/CompliancePoliciesProcedures/InstitutionalReviewBoard%28IRB%29/item24737.html>

-- A Complete Application Includes All of the Following:

- (A) A copy of this completed form and a copy of parts B thru F.
- (B) A brief project description (adequate to evaluate risks to subjects and to explain your responses to Parts 1&2)
- (C) Copies of all instruments to be used.
*If this proposal is part of a grant proposal, include a copy of the proposal and all recruitment material.
- (D) The consent form that you will use in the study (see part 3 for more information.)
- (E) Certificate of Completion of Human Subjects Protection Training for all personnel involved in the project, including students who are involved with testing or handling data, unless already on file with the IRB. Training link: (<http://phrp.nihtraining.com/users/login.php>)
- (F) IRB Security of Data Agreement: (<http://research.lsu.edu/files/item26774.pdf>)

1) Principal Investigator: Rank:
 Dept: Ph: E-mail:

2) Co Investigator(s): please include department, rank, phone and e-mail for each
 *If student, please identify and name supervising professor in this space

IRB#	<u>E8379</u> LSU Proposal #
<input checked="" type="checkbox"/>	Complete Application
<input checked="" type="checkbox"/>	Human Subjects Training
<input checked="" type="checkbox"/>	IRB Security of Data Agreement

3) Project Title:

Study Exempted By:
Dr. Robert C. Mathews, Chairman
Institutional Review Board
Louisiana State University
203 B-1 David Boyd Hall
225-578-8692 | www.lsu.edu/irb
Exemption Expires: 8/14/2016

4) Proposal? (yes or no) No If Yes, LSU Proposal Number
 Also, if YES, either This application completely matches the scope of work in the grant
 OR More IRB Applications will be filed later

5) Subject pool (e.g. Psychology students)
 *Circle any "vulnerable populations" to be used: (children <18; the mentally impaired, pregnant women, the aged, other). Projects with incarcerated persons cannot be exempted.

6) PI Signature Date (no per signatures)

** I certify my responses are accurate and complete. If the project scope or design is later changes, I will resubmit for review. I will obtain written approval from the Authorized Representative of all non-LSU Institutions in which the study is conducted. I also understand that it is my responsibility to maintain copies of all consent forms at LSU for three years after completion of the study. If I leave LSU before that time the consent forms should be preserved in the Departmental Office.

Screening Committee Action:	Exempted <input checked="" type="checkbox"/> Not Exempted <input type="checkbox"/>	Category/Paragraph	<u>2</u>
Signed Consent Waived?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Reviewer	<u>Mathews</u>	Signature	<u>Rob C Mathews</u>
		Date	<u>8/13/13</u>

Vita

Claire Taylor was born near Chicago, Illinois and graduated with her Bachelor's degree in Statistics and Psychology from Rice University in 2009. Claire earned her Master's degree in Industrial-Organizational Psychology from Louisiana State University in 2011. While writing her dissertation, Claire spent a year interning with the Assessment and Selection Group at Merck & Co, Inc. in Whitehouse Station, NJ and a year interning with the Selection Solutions Group at Development Dimensions International in Pittsburgh, PA. She currently lives in Seattle, Washington with her husband, Matt Brannock, and their cat, Ramona.