THE COMPANY WE KEEP: THE IMPLICATIONS OF COWORKER FRIENDSHIPS FOR EMPLOYEE RESOURCES, WELL-BEING, AND WORK OUTCOMES

by

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Dedicated to my husband, Ryan M. Kleshinski

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ABSTRACT

Coworker friendships refer to interpersonal relationships between peers and overlap across work and personal domains of life. Prior research suggests that these relationships are beneficial in some ways and detrimental in others, and that they are characterized by divergent forms of social bonds (i.e., friendly or affective bond and work-related or instrumental bond), relational expectations, and norms. Yet, the processes through which coworker friendships influence employees' work outcomes and well-being remains poorly understood. To illuminate the features of coworker friendships and the mechanisms through which they affect employees, I develop the Coworker Friendship-Resource (CFR) Model. Specifically, building from interaction ritual theory, I explore how features of friendship-nonwork socializing and self-disclosure with coworker along with the personal growth function (i.e., benefit or purpose) of the coworker relationship—simultaneously drain and replenish employees resources or energy by shaping work-nonwork (enrichment and conflict), affective (vitality), cognitive (psychological detachment from work), and relational (intrusion) mechanisms, and subsequent employee work behaviors, well-being, and relationship conflict. I also consider the contingencies affecting these pathways, including contextual work features and individual differences. Overall, the CFR model highlights the simultaneous benefits and burdens of coworker friendships for employees and organizations. To test the CFR model, I conducted a pilot study to validate new measures, a vignette experiment, and a two-wave field study. As a set, the results of the vignette and field studies revealed countervailing effects of the friendship features on resource gain and drain.

INTRODUCTION

For more than twenty years, Gallup's workplace questionnaires have asked: "do you have a best friend at work?" (Gallup, 1999; Mann, 2018). Although Gallup's extensive history of including this question would suggest that having friends at work is desirable or beneficial, research findings are more equivocal. Coworker friendship refers to the voluntary, affective, and personal relationship between two individuals (i.e., a dyad) who work together and depend on each other at work (e.g., Bridge & Baxter, 1992; Ingram & Zou, 2008). Prior research indicates that coworker friendships can be beneficial (Chung, Lount, Park, & Park, 2018; Methot, LePine, Podsakoff & Christian, 2016) yet also harmful to employees (Methot et al., 2016; Pillemer & Rothbard, 2018; Sias, Heath, Perry, Silva & Fix, 2004). This is consistent with other research showing that *coworker relationships* (which may not necessarily include a friendship) can be a source of positive influence, such as help and support (e.g., Bakker & Xanthopoulu, 2009; Chiaburu & Harrison, 2008; Fasbender, Burmeister, & Wang, 2020) as well as negative influence, such as undermining (Chiaburu & Harrison, 2008; Ng & Wang, 2019; Reh, Tröster, & van Quaquebeke, 2018). Another study found that coworker satisfaction spills over to satisfaction with one's job and life (Simon, Judge, & Halvorsen-Ganepola, 2010). Friendships outside of work can also be a source of positive influence (Craig & Kuykendall, 2019; Hartup & Stevens, 1997), yet can likewise be "problem-fraught" (Wiseman, 1986, p. 209).

However, little is known about concurrent benefits and burdens of coworker friendships. This is surprising, given key distinctions between coworker relationships and friendships, and the complexity that blending them entails. Coworker friendships include both instrumental (i.e., taskrelated) and affective (i.e., friendly) features (Ingram & Zou, 2008; Methot et al., 2016). Friendships are voluntary (Wiseman, 1986), whereas interactions with coworkers are often required (Henderson & Argyle, 1986, p. 266). Coworker and friend roles also entail divergent role expectations, norms, and patterns of interaction (Bridge & Baxter, 1992; Pillemer & Rothbard, 2018; Schinoff, Ashforth, & Corley, 2020). For example, friends are expected to participate in leisure activities and personal conversations together (Argyle, 1992) and coworkers are expected to exchange work-related information (Kram & Isabella, 1985). Although extensive research exists on both coworker relationships and friendships, the features of coworker friendships specifically are far less clear. Research on friendship is typically examined from a social psychology perspective, whereas research on coworker relationships tends to be found in management and organizational psychology literatures. Synthesizing these literatures may uncover insights about features of coworker friendship and their effects that can help employees and organizations maximize the benefits and minimize the burdens of these relationships.

Moreover, although coworker friendships reflect an intersection of work and nonwork domains, a work-nonwork perspective on these cross-domain relationships has been overlooked. As a result, it is unclear how coworker friendships affect employees both at work and outside work, and the pathways (e.g., work-nonwork spillover, Edwards & Rothbard, 2000) through which this influence occurs. For example, organizational efforts to host "fun" nonwork events and activities (Michel, Tews, & Allen, 2019), which integrate employees' work and nonwork lives (Nippert-Eng, 1996), may not be welcomed and enjoyed by all employees (Dumas, Phillips, & Rothbard, 2013). The book *Ask a Manager* offers advice on how to politely decline social events outside of the office (e.g., due to domestic obligations or a need to recharge, Green 2018), suggesting employees struggle to manage the integration of personal and work activities. As another example, practical recommendations to personally "get to know" coworkers (e.g., Cialdini, 2001; Riordan, 2013) may not reflect a reality in which the benefits and challenges of these relationships coexist, which may be difficult for employees and organizations to manage (Ingram & Zou, 2008). Coworker friendships are clearly gaining attention from the popular press and practitioners, yet more research on these relationships is needed.

Thus, the objective of my dissertation is to examine the implications of coworker friendships through conceptual model development, pilot study, vignette experiment, and two-wave field study. Prior research on work friendships often exclusively focuses on benefits *or* burdens, is under-developed with regard to what coworker friendship truly entails (i.e., the blurring between work and personal roles), and typically takes a cross-sectional approach. Importantly, interaction ritual theory (Collins, 2004), "a theory of social dynamics" (p. 42), offers a novel perspective that accounts for critical features of social interaction episodes and their effects on individuals' energy. Following this theory, I examine implications of coworker friendship features for employees' energy or resource drain/gain and distal work (e.g., performance) and nonwork (e.g., well-being and relational) outcomes.

Specifically, building from interaction ritual theory and literature on friendships and coworker relationships, I first identify three critical friendship features in coworker relationships: nonwork self- disclosure with coworker, nonwork socializing with coworker, and the nonwork function of the relationship with the coworker (i.e., personal growth). Given Collins' (2004) prediction that interaction rituals generate or deplete individuals' energy, I investigate implications of these friendship features for employees' resource gain and drain. I operationalize resource gain and drain as work-nonwork (work-personal enrichment, Greenhaus & Powell, 2006, and work-personal conflict, Wilson & Baumann, 2015), affective (the vitality dimension of thriving, Porath, Spreitzer, Gibson, & Garnett, 2012), cognitive (the recovery experience of psychological detachment from work, Sonnentag & Fritz, 2007), and relational (intrusion or violation of

boundaries between work and personal domains, Ehrhardt & Ragins, 2019) mechanisms. I then consider whether the degree of various work features in the coworker relationship, namely work information sharing, task interdependence, and the work relationship function of career advancement, interact with friendship features in influencing resource gain/drain. I also explore the moderating effects of individual differences. Finally, I predict how coworker friendship features ultimately hold implications for employees at work and outside of work via resource gain/drain mechanisms.

The remainder of my dissertation proceeds as follows. Below, I briefly outline the intended contributions of this research to the work-nonwork interface, work relationships, and well-being literatures. Next, I review prior research on coworker relationships, friendships, and coworker friendships, in order to highlight the features (e.g., expectations and norms) of these relationships, as well as the ways in which coworking and friendship complement and contradict one another when blended into a single relationship (i.e., coworker friendship). After the literature review, I present interaction ritual theory (Collins, 2004) as the theoretical foundation for my conceptual model. In this section, I describe the primary predictions and terminology of this theory, including features of interaction rituals and their implications for energy gain and drain. Then, building from interaction ritual theory, I develop hypotheses about the proximal effects of friendship features in coworker relationships on resource or energy gain and drain mechanisms, moderating effects, as well as the downstream implications for employees' work, personal, and relational outcomes. Illustrated in Figure 1 below is the Coworker Friendship-Resource (CFR) model that I propose and test in this dissertation. After developing hypotheses, I describe methods and results of testing the CFR model, and discuss findings and theoretical and practical implications, as well as avenues for future research.



Figure 1: Coworker Friendship-Resource (CFR) Model

Intended Contributions

Conclusions from my dissertation are expected to contribute to research on work relationships, the work-nonwork interface, and well-being in several important ways. First, my dissertation offers a more balanced perspective of work friendships by simultaneously examining the beneficial and detrimental implications of such relationships and the resource gain and drain processes through which these effects occur. Prior research on coworker friendships tends to fall into one of two camps: one focusing on beneficial effects (e.g., Bowler & Brass, 2006; Chung et al., 2018) and the other centered on detrimental effects (e.g., Bridge & Baxter, 1992; Pillemer & Rothbard, 2018). This dichotomy is evident in phrases used in titles of recent workplace friendship articles: "friends with performance benefits" (Chung et al., 2018) and "friends without benefits" (Pillemer & Rothbard, 2018). Focusing only on the bright side or only on the dark side of work friendships fails to capture the simultaneous benefits and costs of these relationships (Ingram & Zou, 2008). Elucidating ways in which coworker friendships are both energizing and draining for employees holds practical implications for topics that are of concern to managers and organizations such as networking (Casciario, Gino, & Kouchaki, 2014), organizational gatherings (e.g., teambuilding offsites, company retreats, Michel et al., 2019), and required or expected socializing outside of work (e.g., happy hours, volunteering with coworkers). I explore the processes of resource gain and drain arising from coworker friendship and the contingencies shaping these effects. By integrating both the bright and dark sides of friendship at work, I synthesize disconnected research streams and in turn more fully account for friendships' simultaneously positive (e.g., job performance and life satisfaction) and negative (e.g., relationship conflict) effects and the resource pathways through which these effects occur.

Second, I develop the specific ways in which friendship is expressed between coworkers. Prior research in this area tends to adopt a narrow conceptualization of work friendship. Specifically, studies often examine simply whether friendship exists between employees who also interact in a work setting (e.g., Bridge & Baxter, 1992; Methot et al., 2016), typically with a social network approach in which participants count the number of overlapping instrumental (i.e., who they go to for advice or information) and friendship ties with others (e.g., Gibbons, 2004). However, prior research indicates that coworkers who behave in a friendly way toward one another might not always characterize their relationship as a friendship (Ingram & Zou, 2008). For example, Ingram and Roberts (2000) found that one employee did not define his relationship with his coworker as a friendship, yet he demonstrated excitement about the birth of this coworker's child and went out for drinks to celebrate, which is an "act of friendship" (Ingram & Zou, 2008, p. 170). This employee-coworker relationship would likely be excluded from count-based social network approaches. Such approaches, while useful for testing macro research questions about structural patterns in social systems (e.g., Gibbons, 2004), do not help answer more micro research questions about how the degree of friendship in coworker relationships affects employees. In this research, I push beyond count-based approaches to advance a richer and more comprehensive continuum of how coworker friendship is expressed.

Relatedly, I clarify primary features of friendship in coworker relationships by synthesizing research on coworker relationships, grounded in management and organizational psychology literatures, with research on friendship, grounded in social psychology literature. Interaction ritual theory (Collins, 2004) encouraged me to focus on key features of friendship social interactions, which include nonwork self-disclosure and nonwork socializing with a coworker as well as the personal growth function of one's relationship with a coworker (Colbert et al., 2016). In addition, I build from prior research on coworker relationships to investigate how three critical work-related

or instrumental features interact with the friendship features. This allows me to untangle ways in which friendship and work interact within coworker relationships.

Fourth, my dissertation advances a multi-faceted perspective of work friendships. Given that energy generated or drained from social interactions varies across encounters (Collins, 2004), I account for distinct ways in which employees experience resource or energy gain and drain from interactions with a specific coworker. Specifically, in both a vignette experiment and a two-wave field study of employees and their coworkers, I unpack the features of friendship in coworker relationships—personal growth relationship function, nonwork self-disclosure, and nonwork socializing—and their effects on employees' work-nonwork enrichment and conflict, vitality at work, detachment from work, and intrusion. I also account for the work-based context of the coworker relationship by incorporating key work-related features, for example, by testing the moderating effect of task interdependence with one's coworker on these relationships. Overall, my dissertation sheds light on coworker friendship and its effects on well-being, job performance, and relational outcomes.

LITERATURE REVIEW

Coworker Relationships: Conceptualizations, Approaches, and Outcomes

Scholarly interest in social interactions between coworkers began mostly by accident, when results of the Hawthorne studies revealed that peers influence employee behavior and performance (Roethlisberger & Dickson, 1939). Several decades later, coworkers were recognized as a facet of job satisfaction (Smith, Kendall, & Hulin, 1969). Despite these developments, research on coworker relationships did not become more substantive until later in the 20th century, beginning with Kram and Isabella's (1985) work on peer relationships. More recently, scholars called for "greater attention on lateral relationships in organizational research" (Chiaburu & Harrison, 2008, p. 227) and observed that "peer relationships are the most plentiful, yet also among the most understudied workplace relationships" (Sias, 2009, p. 85), indicating more research is still needed. This is surprising in light of Sias' (2009) claims that "most of us spend more time with our peer coworkers than with anyone else at work" and "many of us spend more time with our peer coworkers than we spend with family and friends" (p. 57). Results of a PsycINFO search revealed that the volume of articles on coworker relationships has doubled since Chiaburu and Harrison's (2008) meta-analysis was published. Yet research on coworker bonds continues to be outpaced by research on other work relationships, such as leader-follower relationships (e.g., Martin, Guillaume, Thomas, Lee, & Epitropaki, 2016; see also Sias, 2014).

Key Conceptualizations of Coworker Relationships

Coworker relationships refer to relationships between employees who are peers in an organization "at the same hierarchical level," who are generally similar in status and do not have "formal authority" over each other (Sias, 2009, p. 57). Peer relationships at work have often been

conceptualized as coworker exchange (CWX), which refers to the quality of exchanges between two peers (Sherony & Green, 2002). CWX is expected to vary along the dimensions of respect, trust, and mutual obligation, similar to leader-follower relationships (i.e., leader-member exchange or LMX, Graen & Uhl-Bien, 1995). According to Henderson and Argyle (1986), the key "rules" of coworker relationships suggest that peers expect one another to "cooperate despite dislike" (i.e., these relationships are not voluntary), "ask for help and advice" (i.e., exchange instrumental support), "don't be overinquisitive about private life" (i.e., maintain a boundary between work and nonwork roles), and focus on "efficient exchange of task-focused behavior" (i.e., their function is primarily instrumental) (p. 266). Another key feature of these relationships is task interdependence, which refers to the notion that employees rely on one another to accomplish their work tasks (Pearce & Gregersen, 1991; Wageman, 1995).

Measurement Approaches in Coworker Relationships Research

Coworker relationships have been typically been examined at the individual-level using perceptions from one individual in the coworker relationship (e.g., Colbert et al., 2016; Sherony & Green, 2002). Among studies applying individual-level methodological approaches, some used measures that referenced a specific coworker (e.g., Colbert et al., 2016), which reveals information about the employee's relationship with that focal coworker, whereas other studies referenced coworkers collectively (e.g., Ferguson, 2012), which capture an employee's social context with their peers at work more broadly (rather than their relationship with a specific peer). This distinction is important because in order to understand various features of friendship and work in a coworker relationship, focusing on a specific relationship is needed.

Additionally, a small but increasing number of studies on social interactions between coworkers have used dynamic approaches, such as daily or weekly experience sampling methodology of individuals (Koopman, Lin, Lennard, Matta, & Johnson, 2020; Lanaj, Kim, Koopman, & Matta, 2018; Lim, Ilies, Koopman, Christoforou, & Arvey, 2018; McGrath, Cooper-Thomas, Garrosa, Sanz-Vergel, & Cheung, 2017; Peeters et al., 2016; Zhou, Meier, & Spector, 2019). This represents important progress on coworker research, given that social relationships are "dynamic and fluid" (Ragins & Dutton, 2007, p. 9) and interactions within them fluctuate between positive and negative (Halbesleben, 2012). For example, this literature has revealed that daily and weekly negative interactions with coworkers, including incivility (e.g., Lim et al., 2018; Zhou et al., 2019), mistrust (Lanaj et al., 2018), and envy (Koopman et al., 2020) affect employee wellbeing (burnout; Lanaj et al., 2018; Zhou et al., 2019) and work outcomes (e.g., instigating incivility, Koopman et al., 2020; and withdrawal from work, Lanaj et al., 2018), whereas daily and weekly positive interactions with coworkers, such as getting along with them (McGrath et al., 2017) are beneficial for work attitudes (i.e., work engagement, McGrath et al., 2017) and behaviors (i.e., job crafting crosses over between coworkers, Peeters et al., 2016).

The Effects of Relationships and Social Interactions Between Coworkers

First, the quality of relationships between coworkers (i.e., CWX) or with teammates (i.e., team member exchange or TMX, Seers, 1989) is positively associated with job satisfaction (Sherony & Green, 2002), task performance (Seers, 1989), helping coworkers and organizational citizenship behavior (OCB) (Chen, Takeuchi, & Shum, 2013; Joshi & Knight, 2015; Kamdar & Van Dyne, 2007) as well as with provision of resources such as information and career development (Omilion-Hodges & Baker, 2013) and is negatively associated with burnout (Fernet, Gagné, & Austin, 2010). Similarly, other indicators of coworker relationship quality, such as respect (Ng, Hsu, & Parker, 2021), trust (Peng, Schaubroeck, & Li, 2014), loyalty, affective regard, and contribution (Raabe & Beehr, 2003) are also positively related to a variety of performance

outcomes and job attitudes (i.e., helping, voice, task performance, job satisfaction, and organizational commitment). Moreover, Lyons and Scott (2012) found that coworkers reciprocate one another's helping behaviors.

Other scholars have focused on the development of peer and work relationships and have emphasized how instrumental (i.e., work-related) functions and features, such as task information sharing, are expected and important early in relationship development, whereas affective functions and features, such as trust, emotional support, and personal conversations, become more important in closer or more friendly work relationships (Ferris, Liden, Munyon, Summers, Basik, & Buckley, 2009; Kram & Isabella, 1985). While such models or typologies describe coworker relationship development over a long span of time, such as months or years, other research suggests that dayto-day, positive interactions with coworkers are associated with work engagement and recovery experiences after work (McGrath et al., 2017).

As alluded to in the Introduction, research on coworkers has primarily occurred within two largely distinct research streams that focus either on positive (Colbert et al., 2016; Halbesleben, 2012) or negative (Duffy, Ganster, & Pagon, 2002; Griffin, Stoverink, & Gardner, 2012) social interactions between coworkers (Chiaburu & Harrison, 2008; Lyons & Scott, 2012; Puranik, Koopman, Vough, & Gamache, 2019; Ragins & Dutton, 2007; Spector, 2012). Broadly, positive interactions have received more research attention than negative interactions. Below I review key types of positive and negative coworker interactions and their effects.

In regard to specific positive interactions between coworkers, social support appears to be among the most prevalent forms. Social support is broadly defined as "availability and quality of assistance an individual receives from another person" (Spector, 2012, p. 160). Support is often distinguished as instrumental (i.e., task assistance, Beehr, Jex, Stacy, & Murray, 2000; Colbert et al., 2016) or emotional (i.e., empathy and helping others cope with stress, Colbert et al., 2016). Coworkers specifically are thought to be "the most likely, and most important, source of emotional and instrumental support for employees" (Sias, 2005, p. 379). Coworker support is meta-analytically linked with less role stress, intent to quit, absenteeism, turnover, greater job satisfaction, task performance, and OCBs (Chiaburu & Harrison, 2008), as well as less conflict between work and family (French, Dumani, Allen, & Shockley, 2018) and less burnout (Halbesleben, 2006). The different forms of support appear to have differential relationships with outcomes, such that assisting coworkers with job tasks was related to job satisfaction and giving to others at work was associated with meaningful work (Colbert et al., 2016). Another study found that the quality of contact with coworkers was positively related to empathic concern for them and this relationship was stronger when participants' view of time itself (i.e., focus on future time) was high (Fasbender et al., 2020).

Burmeister, Wang, and Hirschi (2020) found that coworkers' receiving and providing knowledge to each other, which relates to supporting one's tasks, influences their work motivation. Conversations about work and nonwork topics—historically conceptualized as a form of social support—are related to less depression (Beehr et al., 2000), psychological strain (Fenlason & Beehr, 1994), and burnout (Zellars & Perrewé, 2001). Other research recognized self-disclosure, including commiseration with coworkers, as a separate construct and investigated the role of coworker reframing (which could be viewed as emotional support) on employee emotions (hope and anger) following "unfairness talk" (Baer, Rodell, et al., 2018). As I will elaborate below, friendship scholars characterize self-disclosure as distinct from social support.

Interestingly, other studies found that self-disclosure oriented around complaining and negative job-related communication between coworkers had harmful effects, such as on job attitudes (Fay & Kline, 2011) and strain (Fenlason & Beehr, 1994). The majority of research on negative exchanges between coworkers has focused on social undermining, defined as behavior intended to hurt employees' ability to succeed at work and develop and keep positive social relationships (Duffy et al., 2002, p. 332), and incivility, which refers to violation of respect and includes rudeness and a lack of courtesy toward others (Andersson & Pearson, 1999; Ferguson, 2012). These negative coworker behaviors are meta-analytically related to greater role stress, quitting intentions, and turnover, as well as less job satisfaction and helping (Chiaburu & Harrison, 2008). Social undermining and incivility from coworkers are also positively related to depression (Duffy, Ganster, Shaw, Johnson, & Pagon, 2006), somatic complaints (Duffy et al., 2002), burnout (Zhou et al., 2019), work-to-family stress transmission (Ferguson, 2012) and conflict (Zhou et al., 2019), withdrawn and angry marital behavior (Lim et al., 2018), and social conflict with the employee's partner (Sanz-Vergel, Rodríguez-Muñoz & Nielsen, 2015). Moreover, hostility between coworkers affected each other's insomnia and coworkers' innovative behavior made it more difficult for each other to detach from innovation-related job demands (Ng & Wang, 2019). Lastly, evidence shows that undesirable behaviors or states, such as absenteeism (ten Brummelhuis et al., 2016) and burnout (ten Brummelhuis, Bakker, & Euwema, 2010), cross over between coworkers.

Friendships: Conceptualizations, Approaches, and Outcomes

In contrast to research on coworker relationships, research on friendships has a much more extensive history. Among the earliest recognized scholars of friendship is the philosopher Aristotle (2014), who argued friendship is characterized by mutual goodwill and grounded in pleasure/hedonic value, virtue, or utility (i.e., a friend is a means to an end). In the social sciences, the earliest friendship research is considered to be Monroe's (1898) work on friendship among

children (Hartup & Stevens, 1997) and Lazarsfeld and Merton's (1954) and Simmel's (1950) work on friends from a sociological perspective. In spite of this rich history, friendship has been considered to be a "neglected topic in the field of personal relationships," compared to other relationships such as couples and parent-child bonds (Derlega & Winstead, 1986, p. vii).

Key Conceptualizations of Friendships

Friendship refers to the voluntary and mutual relationship and social interactions between two people (Hays, 1988) who treat each other "as unique individuals rather than as packages of discrete attributes or mere role occupants" (Wright, 1984, p. 119). In other words, friendships have a "person-qua-person factor" where members of the friendship treat each other as whole people (Wright, 1984, p. 119), "revealing their real selves" (Stinson & Ickes, 1992, p. 788). Friendships are also "privately negotiated," meaning they are not determined by public or formal institutional rules and norms (Rawlins, 1992, p. 9). Friendships are primarily oriented around goals that are socio-emotional rather than instrumental (Hays, 1988; Stinson & Ickes, 1992; Wiseman, 1986), which include affective caring and concern for the friend; assisting the friend when needed; companionship, which refers to spending leisure time with each other; and intimacy, defined as candidly disclosing and confiding one's thoughts, feelings, and experiences (Adams & Bliezner, 1994; Argyle & Henderson, 1984; Hartup & Stevens, 1997; Hays, 1984; Hays, 1988; Kenny & Kashy, 1994; Mendelson & Aboud, 1999).

Similar to coworker relationships, friendships typically develop between peers of similar status (McAdams, Healy, & Krause, 1984; Rawlins, 1992; Wayne, 2012) and are characterized by interdependence, such that "the behavior of each participant is to some degree coordinated with and influenced by the behavior of the other" (Hays, 1988, p. 392). Yet, interdependence in friendships is voluntary (Craig & Kuykendall, 2019; Wright, 1984), making these relationships

more fragile (Wiseman, 1986), less binding (Demir, Tyra & Özen-Çıplak, 2019), and more easily dissolvable (Argyle & Furnham, 1983; Bahns, Crandall, Gillath, & Preacher, 2017; Wayne, 2012) than other relationships, such as couples or work relationships. When negative interactions occur within a friendship, such as conflict (Wiseman, 1986), friends can choose to part ways (Laschober, Allen, & Eby, 2012), and do so with fewer repercussions. When individuals' time and energy are limited, friendships are often the first type of relationship to be sacrificed (Parris, Vickers, & Wilkes, 2008), for example, if work demands prevent individuals from spending time with friends (Keeney, Boyd, Sinha, Westring, & Ryan, 2013; Wilson & Baumann, 2015).

Measurement Approaches in Friendship Research

One historical strength of friendship research is its theoretical and empirical emphasis on dynamism within these relationships. Scholars acknowledge that social interactions between friends vary over time (Hartup & Stevens, 1997) and friendships evolve (Adams & Bliezner, 1994; Hays, 1984). That is, like other relationships, friendship is a "dynamic process" (Hays, 1988, p. 392; see also Stinson & Ickes, 1992). Weekly and daily diary studies and other longitudinal methods have been relatively common, even in early research on friendship (e.g., Duck & Spencer, 1972; Hays, 1984; Hays, 1985; Hays, 1989; Newman, Schug, Yuki, Yamada, & Nezlek, 2018; Sandstrom & Dunn, 2014; Selfhout, Denissen, Branje, & Meeus, 2009). The majority of friendship measures used reference a specific friend (e.g., a best friend) but numerous studies have used measures referencing friends collectively. As noted above, similar to research on coworker relationships, referencing a focal friend uncovers insights about the relationship with that friend specifically (vs. one's friendships more broadly).

The Effects of Friendships and Social Interactions Within Them

Research on friendship development has largely focused on three critical constructs: intimacy, proximity or propinquity, and similarity. First, intimacy is comprised of breadth, which refers to range in the content of exchanges within the relationship, and depth, or the difference between small talk about current events and discussing one's family background and romantic life (Hays, 1984). The notion that intimacy is a key feature of relationship development stems from social penetration theory (Altman & Taylor, 1973; Altman, Vinsel, & Brown, 1981), which predicts that as relationships grow, communication within them becomes deeper through intentional disclosure of personal thoughts. That is, self-disclosure is a key aspect of intimacy or closeness in friendships, such that greater self-disclosure occurs within and indicates intense friendships (Argyle & Furnham, 1983; Argyle & Henderson, 1984; Becker, Johnson, Craig, Gilchrist, Haigh, & Lane, 2009; Hartup & Stevens, 1997; Hays, 1984). Second, other research suggests that physical proximity or propinquity influences how friendships form (Duck & Spencer, 1972; Nahemow & Lawton, 1975; Rubin & Shenker, 1978), such as close distance to neighbors or roommates. Lastly, "seeking similar others is a dominant strategy for friendship formation" (Bahns et al., 2017, p. 330). That is, people want to be friends with others who can participate in hobbies or activities with them and who have similar values, experiences, and interests (Bahns et al., 2017; Hartup & Stevens, 1997; Werner & Parmelee, 1979).

Hartup and Stevens (1997) distinguished between structural components of friendships, such that deep structure refers to the "essence" of friendships (i.e., what friends are) and surface structure captures specific social interactions in friendships "that characterize them at any given moment or in any given situation" (i.e., what friends do) (Hartup & Stevens, 1997, p. 355). Friendship quality, a gauge of deep structure, is associated with indicators of hedonic well-being such as happiness, positive mood, and life satisfaction (Argyle, 1992; Anderson & Fowers, 2020; Demir & Özdemir, 2010; Demir, Özen, Dogan, Biljk, & Tyrell, 2011; Demir, Şimşek & Procsal, 2013; Demir et al., 2019; Demir & Weitekamp, 2007; Sandstrom & Dunn, 2014) as well as with eudaimonic well-being indicators such as vitality, personal growth, and life purpose (Akin, Akin, & Uğur, 2016). Friendships are also positively related to attachment with one's community (Gonzalez, Ragins, Ehrhardt, & Singh, 2018) and career-related decision-making (Kvitkovičová, Umemura, & Macek, 2017).

Turning to surface structure, the specific encounters or "action components" (Adams & Bliezner, 1994, p. 174) of friendships include activities such as leisure or hobbies as well as conversations and self-disclosure (Hartup & Stevens, 1997; McAdams et al., 1984; Walker, 1995). As such, friendship encounters both reflect and influence the relationship (Hays, 1989). Hays (1985) advocated studying friendship at both the social interaction and relationship levels, as well as operationalizing friendship encounters in several ways (i.e., simultaneously examine self-disclosure and shared leisure), to partial out effects of encounter types. Companionship or sharing activities is an important form of surface structure in all types of friendships (e.g., best friends, newly formed friendship intensity and closeness (Hays, 1984; Hays, 1985; Hays, 1989), well-being (Coleman & Iso-Ahola, 1993; Cooper, Okamura, & Gurka, 1992; Iwasaki & Mannell, 1999; Rook, 1987), and positive affect (Clark & Watson, 1988). Social leisure also provides an opportunity to exchange resources with friends, such as emotional support and information (Auld & Case, 1997).

Self-disclosure, another form of surface structure, is meta-analytically associated with liking (Collins & Miller, 1994) as well as related to positive affect (Vittengl & Holt, 2000), relational closeness (Hinds & Cramton, 2014), and intimacy (Shelton, Trail, West, & Bergsieker,

2010). Yet self-disclosure also creates vulnerability (Rawlins, 1983). An important consideration in self-disclosure between friends is the notion of reciprocity—whether friends' sharing of personal information is returned (Derlega, Metts, Petronio, & Margulis, 1993; Forgas, 2011; Worthy, Gary, & Kahn, 1969). Specifically, the "disclosure of a given type has to be reciprocated before the dyad can move to a new level" (Hornstein & Truesdell, 1988, p. 62). For example, a lack of reciprocity occurs when one friend divulges "too much too soon" (Shelton et al., 2010, p. 73). If self-disclosures are inconsistent with expectations in the relationship, they can be disruptive and act as turning points in the relationship's trajectory (Gibson, 2018).

Research also suggests that reciprocity in social support between friends— "the provision of aid and repayment of kindnesses"-is important; without it, friendships can deteriorate (Wiseman, 1986, p. 205). Social support between friends was found to be reciprocal in quantitative studies of friendship dyads (Deci, La Guardia, Moller, Scheiner, & Ryan, 2006; Hays, 1989) and qualitative interviews (Walker, 1995). Providing social support to a friend might also be uncomfortable when a friend acquires something one desires, which calls into question the basis of the friendship (e.g., when a friend in an infertility support group becomes pregnant; Glover & Parry, 2008). Receiving support from friends has been associated with life satisfaction (Craig & Kuykendall, 2019), needs satisfaction, and relationship quality (Deci et al., 2006). Deci et al. (2006) found that providing support to friends more strongly predicts relationship quality than receiving support. Friends are more likely to correctly understand one another's thoughts or feelings (Ickes, 1993), compared to strangers (Stinson & Ickes, 1992) and thus have a mutual understanding. This is consistent with research showing that interpersonal mindfulness and perspective-taking predict friendship quality (Pratscher, Rose, Markovitz, & Bettencourt, 2018). Lastly, friendship closeness is positively related to giving and receiving instrumental and emotional support (Hays, 1989). Overall, friendship scholars conceptualize social support and selfdisclosure as distinct constructs. Whereas social support is a key feature of *both* friendships and coworker relationships, self-disclosure is a distinct feature of friendship in particular.

Coworker Friendships: Conceptualizations, Approaches, and Outcomes

The earliest known research on coworker friendship in the organizational sciences is Shen's (1925) work on how friendship with a colleague influences one's ratings of the colleague's leadership, adaptability, and persistence. Nearly fifty years later, Hackman and Lawler (1971) identified "friendship opportunities" at work as a job characteristic that is positively correlated with job satisfaction, feeling accomplished at work, high quality work, developing close friendships, and "personal growth" (p. 273). Their research provided initial evidence that friendships developed at work influence both work and personal outcomes. However, the large and continuously growing body of research across such disciplines as personal relationships, sociology, organizational behavior, and social psychology, suggests work friendship is a phenomenon worthy of study in its own right (i.e., it is more than a job characteristic). Halbesleben (2012) noted that "given the amount of time spent at work, it is perhaps little surprise that coworker relationships often develop into friendships" (p. 120). Hochschild's (1997) work revealed that work was the most common domain where participants had friends, and work friends could "joke with and confide in" one another at work as well go for drinks and participate in hobbies together outside of work (p. 188).

Key Conceptualizations of Coworker Friendship

As indicated earlier, a synthesis of prior conceptualizations indicates that coworker friendship refers to the degree to which two peers who work together have a voluntary, affective, and personal relationship (Bridge & Baxter, 1992; Ingram & Zou, 2008; Methot et al., 2016; Lincoln & Miller, 1976; Pillemer & Rothbard, 2018; Rawlins, 1992; Sias & Cahill, 1998).¹ Coworker friendships "transcend the workplace" and work roles (Rawlins, 1992, p. 167; Sias & Cahill, 1998) and are more complex than relationships that are strictly work- or friendship-oriented (Morrison, 2004). This is because coworker friendships combine instrumental features—these relationships are sources of information and advice—with affective features, such as companionship or socializing outside work (Bridge & Baxter, 1992; Hinds & Cramton, 2014) and personal self-disclosure and conversations (Dumas et al., 2013; Khazanchi, Sprinkle, Masterson, & Tong, 2018) (Elsesser & Peplau, 2006; Haythornthwaite & Wellman, 1998; Kramer, 1996; Ingram & Roberts, 2000; LePine, Methot, Crawford, & Buckman, 2012; Marks, 1994; Methot et al., 2016; Pedersen & Lewis, 2012; Rawlins, 1992; Rumens, 2017; Shah, Parker, & Waldstrøm, 2017).

Research on social networks, one of the primary literatures in which inquiry on friendship at work has thrived for the past several decades, characterizes these relationships as *multiplex*. This term is defined as the "overlap of roles, exchanges, or affiliations in a social relationship" (Verbrugge, 1979, p. 1286), such as the overlap between coworker and friend roles found in a coworker friendship (LePine et al., 2012; Methot et al., 2016; Schinoff et al., 2020). Multiplexity is considered to be a property of the relationship between coworker friends (Verbrugge, 1979). Coworker friendships have also been conceptualized in terms of boundaries, such that these

¹ I focus specifically on friendship between coworkers, who are peers at work, and exclude friendship between supervisor and employee or between mentor and mentee, which involve hierarchical differences and different power dynamics and therefore hold different implications and challenges than friendship with a work peer (i.e., coworker) (Sias et al., 2004; Unsworth, Kragt, & Johnston-Billings, 2018). While most of the literature reviewed in this section is based on friendship between coworkers, I also draw from studies that have examined friendship in work relationships more broadly to establish and summarize findings surrounding relationships that integrate instrumental and affective features (also, several studies do not specify the type of work relationship). In addition, coworker friendships are distinct from romantic relationships in the workplace (Pillemer & Rothbard, 2018; Sias, 2009).

relationships entail "blurring of relational boundaries" (Morrison, 2004, p. 114), "fuzzy boundaries" (Pettinger, 2005, p. 46) and going "beyond the professional boundary" (Sias & Gallagher, 2009, p. 79). Along these lines, Marks (1994) suggested that coworker friends "are fully aware of each other's multiple roles" and "conversationally attend to whichever role (or roles) is generating the most concern at a given time" (p. 855).

Another stream of research suggests that the workplace itself and working relationships with coworkers provide an "incubator" (Sias & Gallagher, 2009, p. 79) to develop and maintain coworker friendships. In other words, the workplace is not only a context where friendships arise, but also helps facilitate their development and maintenance (Berman, West & Richter, 2002; Bridge & Baxter, 1992; Hinds & Cramton, 2014; Kim, Lin, & Kim, 2019; Pettinger, 2005; Sias & Cahill, 1998). Specifically, work brings together individuals with similar occupational interests and work experiences (Sias & Gallagher, 2009) and these individuals often work in close proximity—their desks or offices may be near one another (Berman et al., 2002; Elsesser & Peplau, 2006; Khazanchi et al., 2018; Rawlins, 1992). Moreover, work breaks offer employees a chance to participate together in personal conversations (Hinds & Cramton, 2014; Kim et al., 2019; Pettinger, 2005) or leisure pursuits (Michel et al., 2019). Work-oriented social or networking events can often have the dual purpose of furthering professional goals as well as developing, cementing, or catching up with previously established friendships (Casciaro et al., 2014; Ingram & Morris, 2007). Coworker friendships have also been characterized as a "haven" (Marks, 1994, p. 848) and a "safe space" (McBain & Parkinson, 2017, p. 208) at work.

Early research indicated a wide range in the intensity of friendships developed in the workplace (Argyle, 1992; Berman et al., 2002; Haythornthwaite & Wellman, 1998; Henderson & Argyle, 1986; Kram & Isabella, 1985; Rawlins, 1992; Sias & Cahill, 1998). For example, Argyle

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(1992) and Henderson and Argyle (1986) differentiated between pure work relationships, where individuals only see each other in a work context and do not enjoy one another's company outside work; friendly working relationships, which have some degree of personal-related social interaction; work friends, who go to lunch or coffee during the workday but otherwise have a bounded relationship; and social friends, who regularly spend time with one another outside of work contexts. This is also consistent with other research revealing that coworker relationships generally range from acquaintance to work friend to close friend (Haythornthwaite & Wellman, 1998; Kram & Isabella, 1985; Rawlins, 1992; Sias & Cahill, 1998).

Measurement Approaches in Workplace Friendship Research

The predominant methodology to date for studying work and professional friendships is social network analysis. This typically entails focusing on the structural development and implications of friendship networks. A social network perspective characterizes coworker friendships as "systems for making decisions, mobilizing resources, concealing or transmitting information" and other work-related functions (Lincoln & Miller, 1979, p. 196). In social network studies, friendship is often operationalized as whether the participant considers the other individual a friend or socializes with him or her outside of work, and then counts of number of these individuals (Albrecht & Hall, 1991; Dahlin, Kelly & Moen, 2008; Gibbons, 2004; Gibson, 2005; Hood, Cruz, & Bachrach, 2017; Kim et al., 2019; Klein, Lim, Saltz, & Mayer, 2004; Krackhardt & Kilduff, 1990; Krackhardt & Kilduff, 1999; Matusik, Heidl, Hollenbeck, Yu, Lee, & Howe, 2019; Methot et al., 2016). Because this stream of research focuses on the structure of interlinked friendships, less attention is paid to the features of the friendships themselves or how a specific friendship relationship affects employees. That is, social network approaches tap only part of the relationship's deep structure (Hartup & Stevens, 1997) and do so using a dichotomy, without

considering the surface structure—specific encounters between coworkers. As another limitation of this methodology, items that ask if participants are both friends and coworkers with other employees are often double-barreled and may produce halo bias (e.g., "I have both friendship and work-related relationships with this individual," Methot et al., 2016, p. 342).

Of studies adopting an individual-level perspective, the majority of measures reference coworkers collectively (e.g., Craig & Kuykendall, 2019; Dumas et al., 2013; Endrejat, Barthauer, & Kauffeld, 2018; Nielsen, Jex, & Adams, 2000) while fewer measures refer to a specific coworker (e.g., Bridge & Baxter, 1992; Halpern, 1996; Henderson & Argyle, 1996). In both approaches, extant scales have operationalized coworker friendships as the degree of the following features: friendship in a broad sense (e.g., "This person is my friend" Colbert et al., 2016, p. 1223; Gibbons & Olk, 2003; Ingram & Morris, 2007; Niven, Holman, & Totterdell, 2012), socializing or leisure activities with coworkers (Dumas et al., 2013; Endrejat et al., 2018; Morrison, 2002; Nielsen et al., 2000), or personal conversations or self-disclosure (Dumas et al., 2013; Elsesser & Peplau, 2006; Nielsen et al., 2000; Price & Arnould, 1999; Shah et al., 2017). However, all three features are not typically examined simultaneously, even though they are all clearly central to friendships as discussed above.

Applying Hartup and Steven's (1997) surface and deep structure distinction, personal selfdisclosure and socializing comprise surface structure. Morrison (2004) and Ingram and Zou (2008) recommend measuring different aspects of the friendship and the degree of affective and instrumental features. Similar to social network studies of workplace friendship, studies referencing coworkers collectively capture relationships with others as a set (i.e., friendship network size), rather than the functions or features of a specific coworker friendship relationship. This distinction is important for several reasons. First, the implications of friendship-related social interactions with a specific coworker would likely differ from the implications of having a wide set of friends at work or the number of work friends one has. For example, Methot and colleagues (2016) used a social network approach to examine the effects of number of work friends (i.e., multiplex network size) on difficulty of maintaining these relationships. While maintaining a large network of friends at work may be difficult (e.g., keeping track of many of one's coworkers' personal lives and making time to socialize with all of them outside of work), maintaining a specific coworker friendship is likely to be a different experience. Second, studying a specific coworker friendship reveals insights about the relationship itself (i.e., how friendship/affective and instrumental/work-related features interact, which is not possible to examine using social network approaches).

The Effects of Coworker Friendships

Similar to the friendship and coworker relationships literatures reviewed previously, research on coworker friendships has revealed a variety of beneficial and harmful outcomes of these relationships relating to work, social relationships, and well-being. First, these friendships play a key role in newcomer socialization: friendship tie strength with colleagues is positively associated with social integration and commitment to the organization and more strongly predicts assimilation outcomes than information networks (Morrison, 2002). Similarly, the proportion of work friendships was also found to influence employee adjustment after location transfer and was negatively associated with job stress and positively related to job satisfaction and competence with job tasks and work relationships (Kramer, 1996). Coworker friendships appear to compensate for dissatisfying aspects of work, such as low pay (Pettinger, 2005). Moreover, support from work friends and spending nonwork time and socializing with them is related to job satisfaction (Craig & Kuykendall, 2019; Riordan & Griffeth, 1995; Winstead, Derlega, Montgomery, & Pilkington,

1995; Tews, Michel, & Allen, 2014), less voluntary turnover (Tews et al., 2014), and fewer turnover intentions (Riordan & Griffeth, 1995). Lastly, employees who are friends with the same sets of other employees in the organization (i.e., structural equivalence) have greater similarity in their perceptions of organizational support (Zagenczyk, Scott, Gibney, Murrell, & Thatcher, 2010).

Turning to performance outcomes, Methot and colleagues (2016) found countervailing pathways between multiplex network size (i.e., number of work friends collectively) and task performance, such that trust enabled and emotional exhaustion impaired performance. This is consistent with Grayson's (2007) finding that work friendships are related to less productivity. Work friendships in a networking context have been associated with feelings of "dirtiness," which is linked to decreased networking and lower job performance (Casciaro et al., 2014). Other research suggests a curvilinear relationship between the number of coworker friendships and task performance, such that performance is maximized when employees have a moderate number of such relationships (Shah et al., 2017). Other studies revealed that friendships with colleagues in other departments was positively associated with adaptability to change in the organization (Krackhardt & Stern, 1988), friendship strength was positively related to both the provision and receipt of interpersonal citizenship behavior (Bowler & Brass, 2006), and strengthened the relationship between person-organization fit and feeling understood, which in turn fostered organizational citizenship behaviors and job performance (Kim et al., 2019).

The strength and proportion of work friends have been associated with greater frequency, variety, and quality of information exchange; that is, coworkers who are friends discuss a wider range of topics spanning work and nonwork (Haythornthwaite & Wellman, 1998; Sias, 2005). Coworker and professional friendships are related to discussing new ideas and innovation (Albrecht & Hall, 1991; Lu, Hafenbrack, Eastwick, Wang, Maddux, & Galinsky, 2017), individual

innovation behaviors (Donati, Zappalà, & González-Romá, 2016), and industry-level innovation (Foley, Edwards, & Schlenker, 2014). Work friendships were also associated with the disclosure of errors (Mao & Hsieh, 2017), less unethical behavior (Brass, Butterfield, & Skaggs, 1998), and greater ethicality of business communities (Robinson, 2018). Coworker friends are more sensitive than non-friend coworkers to violations of social expectations, such as intimacy and social support, whereas both types of relationships were equally sensitive to violation of task-related rules, such as assisting with the coworker's work (Henderson & Argyle, 1986).

In terms of personal and relational outcomes, friendship with coworkers is associated with life satisfaction (Endrejat et al., 2018), personal fulfillment (Hodson, 2004), and personal growth (Berman et al., 2002; Colbert et al., 2016). Prior research also suggests that personal conversations and socializing with coworkers are associated with relational closeness (Dumas et al., 2013; Hinds & Cramton, 2014; Marks, 1994) and inclusion (Randel & Ranft, 2007; Sias, 2012). Additionally, social network studies revealed that friendship ties and networks are positively related to trust (Podolny & Baron, 1997; Tasselli & Kilduff, 2018). Within teams and groups, friendship is meta-analytically related to group performance (Chung et al., 2018; see also Jehn & Shah, 1997; Shah & Jehn, 1993) as well as less groupthink (Hogg & Hains, 1998). They have been proposed to foster taskwork and teamwork processes in addition to emergent states such as team satisfaction (LePine et al., 2012) and psychological safety (Schulte, Cohen, & Klein, 2012). However, friendship between negotiators is associated with greater retaliation after an unfair settlement (Goh, Krackhardt, Weingart & Koh, 2014) and conflict between teammates who are friends is more disruptive to team performance (Hood et al., 2017; Pettinger, 2005).

Finally, another stream of research has focused on the way that work friendships intrude upon or disrupt the boundary between employees' work and personal lives (Berman et al., 2002)
and the difficulty of managing conflicting expectations between friendship and coworker norms and expectations (Bridge & Baxter, 1992; Grayson, 2007; Ingram & Zou, 2008; Methot et al., 2016; Parker, 1964; Pillemer & Rothbard, 2018; Price & Arnould, 1999; Rawlins, 1992; Tasselli & Kilduff, 2018; Winstead et al., 1995). For example, coworker friendships were found to be a source of tension between friend and coworker roles (Bridge & Baxter, 1992) and were theorized to create interrole conflict (Pillemer & Rothbard, 2018). Other scholars have questioned whether nonwork socializing with coworkers actually allows employees the opportunity to detach from work (Endrejat et al., 2018; Sonnentag, Venz, & Casper, 2017).

THEORETICAL FOUNDATION: INTERACTION RITUAL THEORY

Interaction Ritual: Definition and Key Forms

Originating from sociology, interaction ritual theory is based on the idea that elements or features of social encounters in "everyday life" (p. 8) energize or drain individuals (Collins, 2004). Collins (2004) defined an interaction ritual as a situation in which two or more individuals are in the same place at the same time and experience mutually focused attention. The foundational form of interaction ritual is "sociable conversation-talking just for the sake of keeping up friendly contact" (Collins, 2004, p. 78). Conversations between individuals reflect the "degree of friendship (i.e., solidarity), intimacy, or respect" in their relationship and "convey in fine detail, known tactically to everyone, the differences between total strangers, persons in fleeting utilitarian contact, persons enacting certain organization roles... persons who have a friendly concern for each other's affairs, buddies, confidantes" (Collins, 2004, p. 18). For example, "personal talk" (e.g., sharing one's personal experiences) connotes personal relationships such as friendships, and "shop talk" (e.g., discussing experiences tied to one's occupation) connotes a professional or instrumental relationship (Collins, 1981, p. 1000, Collins, 2004). Interaction rituals also develop from "communication that is part of the work itself" (i.e., discussing work-related information, Collins, 2004, p. 86). Taken altogether, conversations between people indicate the type of relationship they have, such as the extent of friendship that extends "beyond institutional roles" (Collins, 2004, p. 18). Another key form of interaction ritual is "gatherings," such as sharing a meal or participating in common activities together (Collins, 2004, p. 34), including leisure (Collins, 1993), which similarly connotes the type of interpersonal relationship shared by interaction ritual participants.

Outcomes of Interaction Rituals

Collins (2004) predicts that participants of a successful interaction ritual will experience emotional energy, which refers to a state of feeling invigorated, "pumped up" (p. 108), and enthusiastic, as well as experience a strengthened bond with their co-participant. Interaction rituals are considered to be successful when participants' attention is focused on a shared target or activity (e.g., conversation or leisure activity as indicated above), their emotions become entrained (i.e., synchronized or experienced by both participants), and a clear boundary between participants and non-participants exists. In contrast, "failed rituals are energy draining" (Collins, 2004, p. 53). Collins (2004) adds that individuals who are of similar status are more likely to achieve successful interactional rituals with one another, compared to those who differ in status. Moreover, this theory highlights how individuals will be motivated to repeat successful or energizing interaction rituals and avoid those that are depleting (Collins, 1993). In sum, interaction ritual theory sheds light on the specific features of interaction episodes and highlights their implications for individuals' energy gain and drain.

Interaction Rituals in Work Relationships and Friendships

Interaction ritual theory also provides guidance on how social situations in the workplace and social interactions between colleagues influence this process of energy gain or drain. For example, interaction rituals can arise from "copresence in the workplace" (Collins, 1993, p. 208). Collins (2004) suggests that individuals who experience "high levels of ritual interaction density" at work will be emotionally energized and therefore "find their work lives to be highly motivating for them" (p. 163). This notion is supported by recent quantitative findings that relational energy from social interactions between employees and their leaders were positively associated with job engagement and subsequent job performance (Owens, Baker, Sumpter, & Cameron, 2016). In addition, Metiu and Rothbard (2013) found that features of group interaction episodes, such as mutual attention, fostered problem-solving in the group. Similarly, other scholars used interaction ritual theory to propose that positive social connections at work generate energy among employees (Quinn, 2007; Quinn, Spreitzer, & Lam, 2012).

Interaction ritual theory recognizes that individuals use interaction rituals to manage the closeness of relationships. That is, "there are boundaries among different kinds of social bonds... persons perform ritual work both to keep up an expected tie and to fend off intrusions that would shift it to a closer level" (Collins, 2004, p. 25). Along these lines, Dacin, Munir, and Tracey (2010) drew from interaction ritual theory and found that dining rituals socialized individuals, which in turn cemented boundaries between those differing in social status. That is, interaction rituals might also be used to manage boundaries between coworker and friend bonds.

Integrating interaction ritual theory with research on friendship and coworker relationships reviewed above, I focus on nonwork (e.g., personal- or family-related) self-disclosure and nonwork socializing as key friendship interaction rituals with a coworker, which both meet the criteria specified by Collins (2004) and are consistent with indicators of friendship discussed above (i.e., companionship and intimacy, respectively). Specifically, nonwork self-disclosure and socializing with a coworker indicate a friendship relationship, involve two individuals who are in the same place at the same time and their attention is shared on the same target (Collins, 2004). Synthesizing Hartup and Stevens' (1997) notion of deep and surface structure in friendships would suggest that nonwork self-disclosure and socializing are features of surface structure—social interactions in the relationship at any given point in time. Moreover, self-disclosure and socializing with a coworker represent enjoyable social encounters, similar to how Aristotle (2014) suggests that friendships have hedonic value.

Because interaction rituals indicate the type of bond individuals share (e.g., the extent of their friendship), I also incorporate a key nonwork function of coworker relationships (Colbert et al., 2016) as an indicator of deep structure. Specifically, I focus on the function of work relationships that "extend[s] beyond the workplace" (p. 1201) into the personal domain: personal growth, which occurs when a colleague helps one "grow and develop as a human being" (p. 1203) (Colbert et al., 2016). Personal growth from a work relationship arises when a colleague offers new insights that shift one's perspective or when interacting with a colleague allows one to develop new life skills. This is consistent with the notion from Aristotle (2014) that one of the primary functions of friendships is virtue (i.e., friends help us become more virtuous or improve as people), alluded to above.

CONCEPTUAL MODEL AND HYPOTHESES

Given that successful interaction rituals are energizing for their participants whereas failed interaction rituals are draining (Collins, 2004), I focus on energy gain and drain processes resulting from the friendship interaction rituals between coworkers identified above—nonwork selfdisclosure and nonwork socializing—as well as the nonwork relationship function of personal growth. Recent research grounded in interaction ritual theory has characterized emotional energy as resources, which shift across situations and interaction partners (Baker, 2019; Quinn et al., 2012). In addition, work-nonwork scholars have conceptualized spillover between work and nonwork roles as the generation or depletion of resources and energy between these two roles (Greenhaus & Powell, 2006; Marks, 1977; Rothbard, 2001; ten Brummelhuis & Bakker, 2012), which also corresponds to Collins' (2004) distinction between energy gain and drain. As indicated, literature on coworker friendship suggests these relationships integrate work and personal roles and hold implications for both work and personal outcomes. Thus, as shown in the CFR model shown in Figure 1, I examine resource mechanisms connecting friendship features in coworker relationships to work, personal, and relational outcomes for employees.

Toward this end, I integrate interaction ritual theory with literatures on work-nonwork, thriving, recovery, and relationship functions and boundaries to consider how coworker friendships influence employees' resource gain and drain in both work and personal roles. Overall, I conceptualize resource gain as work-personal enrichment, psychological detachment from work, and vitality, and conceptualize resource drain as work-personal conflict and intrusion. Specifically, on one hand, I argue that coworker friendships generate enrichment between work and personal roles, such that resources generated from the friendship role may improve functioning in the work role and vice versa (Greenhaus & Powell, 2006; Rothbard, 2001). Yet, on the other hand, I also

argue that participating in the work or personal role may deplete resources that impair functioning in the other role (Greenhaus & Beutell, 1985; Wilson & Baumann, 2015), given the conflicting role expectations and norms of coworker friendships discussed above. In addition to worknonwork interface aspects, I also examine vitality, which refers to "feeling energized and alive" at work (Porath et al., 2012, p. 250), psychological detachment from work, defined as "the subjective experience of leaving work behind... during nonwork time" (Sonnentag et al. 2017, p. 368), and intrusion, which reflects "violation of privacy norms, rules, and boundaries in relationships" (Ehrhardt & Ragins, 2019, p. 267). As I discuss below, vitality and psychological detachment represent affective and cognitive resource-generating mechanisms, whereas intrusion is a relational resource-draining mechanism. Next, I develop these proposed main effects and then turn to the moderating effects of work features and key individual differences. This is followed by mediation hypothesis development to elucidate the downstream outcomes shown in Figure 1.

Hypothesized Main Effects

Hypothesized Effects of Friendship Features on Resource Gain

Resource Gain: Work-Nonwork Enrichment

First, work-nonwork enrichment refers to the "extent to which experiences in one role improve the quality of life in the other role" (Greenhaus & Powell, 2006, p. 72). Work-nonwork enrichment refers to how participating in role A generates energy that is transferred to role B, in contrast to how work-nonwork conflict captures how participating in role A drains energy that makes it difficult to participate in role B (Marks, 1977), as I revisit below. This process of interrole energy generation and transfer has been conceptualized as accumulation of resources, including skills, perspectives, social connections, and positive affect in role A, which can be applied to

improving performance in role B (Carlson, Kacmar, Wayne, & Grzywacz, 2006; Greenhaus & Powell, 2006).

Prior research has primarily focused on enrichment between work and family roles, i.e., work-to-family enrichment (WFE) and family-to-work enrichment (FWE) (e.g., Carlson et al., 2006; Greenhaus & Powell, 2006; Lapierre, Li, Kwan, Greenhaus, DiRenzo, & Shao, 2018; McNall, Nicklin & Masuda, 2010). However, scholars are increasingly recognizing nonwork roles outside of the family, such as the personal role (Fisher, Bulger, & Smith, 2009; Knecht, Wiese & Freund, 2016), "defined as including activities one pursues due to his or her own interests or for people outside of his or her family (i.e., other than one's significant other, children, and/or relatives)," for example, "spending time with friends" (Wilson & Baumann, 2015, p. 238). Scholars have suggested that nonwork roles outside of the family such as the personal role also "enrich and are enriched by" the work role (Greenhaus & Powell, 2006, p. 88). An increased focus on enrichment between work and personal roles is consistent with the speculation that coworker friendship "produces a synergistic pool of resources that are richer and of greater utility than resources associated with relationships that are exclusively instrumental or friendship based" (Methot et al., 2016, p. 338). Thus, given my focus on the intersection of work and friend roles, I examine work-personal enrichment as an outcome of coworker friendship features described above (i.e., nonwork self-disclosure and socializing with a coworker as well as the personal growth function of a coworker).

Broadly, the relationship between social interactions in work and nonwork roles and worknonwork enrichment has generally been supported by prior research. For example, Lapierre and colleagues' (2018) meta-analysis revealed that social support from coworkers was positively and significantly related to WFE and FWE. Another study found that networking with coworkers during the workday was associated with work-to-personal enrichment (WPE) at the end of the work via support from coworkers (Baumeler, Johnston, Hirschi, & Spurk, 2018). As reviewed above, social support has often been operationalized as talking about one's nonwork experiences, including events in one's personal life (although social support and self-disclosure are distinct constructs as previously noted) and is typically linked to beneficial outcomes (see Chiaburu & Harrison, 2008). Thus, self-disclosure about personal events and feelings with a coworker would be expected to be enriching, similar to social support from a coworker. More broadly, this is consistent with how being treated with respect by others at work (Voydanoff, 2004) and the quality of relationships with key others at work, such as one's leader (Carlson et al., 2006; Litano, Major, Landers, Streets, & Bass, 2016), were positively related to work-family enrichment. Positive coworker relationships, characterized by respect and support, connect to the notion that coworkers contribute to employees' positive experiences in the work role and this in turn should generate enrichment (i.e., lead to positive experiences in the personal role).

In addition, social activities at work have been proposed to hold benefits including increased creativity and resilience among employees (Michel et al., 2019), socializing during work breaks was associated with positive emotion (Trougakos, Beal, Green, & Weiss, 2008), and daily social activities such as with friends after work were linked with evening happiness (Bakker, Demerouti, Oerlemans, & Sonnentag, 2013). Moreover, commitment in personal roles outside of work, including friendship, was related to work-family enrichment (Paustian-Underdahl, Halbesleben, Carlson, & Kacmar, 2016) and development of interpersonal and task-related skills (Ruderman, Ohlott, Panzer, & King, 2002). This connects to the notion that work relationships can help employees "develop life skills and competencies" (i.e., have a personal growth function, Colbert et al., 2016, p. 1207). Taken together with key tenets of interaction ritual theory, I propose

that the nonwork relationship function of personal growth, along with nonwork self-disclosure and nonwork socializing with one's coworker, will be positively related to work-personal enrichment.²

Resource Gain: Vitality

Next, I turn to the implications of friendship features for vitality, which is considered to be the affective component of thriving (its other component is learning; Porath et al., 2012; Spreitzer, Sutcliffe, Dutton, Sonenshein, & Grant, 2005). Spreitzer, Lam, and Quinn (2011) characterized Collins' (2004) notion of emotional energy as "subjective vitality" (p. 160) or one's felt sense of aliveness and zest, suggesting that vitality is closely aligned with interaction ritual theory. Vitality has also been described as "the positive feeling of having energy available" (Spreitzer et al., 2005, p. 538) and as an affective indicator of one's well-being (Allen & Kiburz, 2012). Porath and colleagues (2012) differentiated between vitality at work and in one's personal life and speculated that a relationship exists between nonwork activities and vitality at work. I focus on vitality at work, given that Collins (2004) indicates that interaction rituals in work contexts, such as with coworkers, hold implications for how one feels about work.

Importantly, vitality and thriving more broadly are considered to be "socially embedded" (p. 537), such that they result from "dynamic interaction with others" (p. 539) (Spreitzer et al., 2005; see also Miller & Stiver, 1997)—and such dynamic interaction may include nonwork self-disclosure and socializing with a coworker. Consistent with this idea, a recent meta-analysis revealed that civil and supportive interactions with coworkers are positively related to thriving at work (Kleine, Rudolph, & Zacher, 2019). Moreover, vitality is positively related to social

² Interaction ritual theory conceptualizes energy broadly and does not specify direction of the energy flow between roles or domains. In my model, the personal growth relationship function, self-disclosure, and socializing occur in the personal domain yet involve one's coworker, suggesting a key connection to the work domain as well. Thus, I collected and examined enrichment and conflict in both work-personal and personal-work directions (i.e., WPE, PWE, WPC, and PWC).

connections at work and the perception that relationships are opportunities to grow (Carmeli & Spreitzer, 2009) as well as demonstrating courtesy to coworkers on a daily basis and communicating about one's work challenges with coworkers (Niessen, Sonnentag, & Sach, 2012; Paterson, Luthans, & Jeung, 2014). In addition, nonwork-related conversations (which connects to nonwork self-disclosure) with colleagues during lunch breaks are positively associated with regulatory resources (Hunter & Wu, 2016) and relationships and social interactions with others at work are positively related to relational energy, which refers to the feeling of vitality or invigoration specifically from interacting with others (Owens et al., 2016). In an intervention study, researchers targeted aspects of employees' social selves by instructing them to demonstrate friendliness (which may include self-disclosure) toward colleagues, in order to foster thriving (Kushlev, Heintzelman, Lutes, Wirtz, Oishi, & Diener, 2017).

Relatedness with others outside of work also holds positive implications for vitality (Reis, Sheldon, Gable, Roscoe, & Ryan, 2000; Ryan, Bernstein, & Warren Brown, 2010; Ryan & Fredrick, 1997). Specifically, Reis and colleagues (2000, p. 428) found daily effects of "hanging out with others" on vitality, consistent with how Ryan and Deci (2008, p. 703) proposed that "hanging out with friends revitalizes" individuals. Social activities with interaction partners outside of work, such as leisure pursuits or conversations with spouses or friends, have also been positively related to energy or vigor (Bakker et al., 2013; Hahn, Binnewies, & Haun 2012; Oerlemans & Bakker, 2014; Sonnentag & Natter, 2004), and positive mood (Clark & Watson, 1988, Sonnentag & Bayer, 2005; Watson, Clark, McIntyre, & Hamaker, 1992), which connect to vitality or energy as a positive activated state (Remington, Fabrigar, & Visser, 2000). Given that nonwork social activities with partners and nonwork friends are associated with vitality, I would expect nonwork socializing with a coworker to similarly contribute to vitality.

Multiple scholars have proposed a connection between thriving and personal growth (Dutton & Heaphy, 2003; Feeney & Collins, 2015a; Feeney & Collins, 2015b; Spreitzer & Sutcliffe, 2007). For example, "thriving involves active, intentional engagement in personal growth" (Spreitzer & Sutcliffe, 2007, p. 76) and "Individuals thrive...when they are able to fully participate in opportunities for fulfillment and personal growth through work, play, socializing, learning, discovery, creating, pursuing hobbies" (Feeney & Collins, 2015a, p. 1). Thus, coworker relationships that have a personal growth function should contribute to vitality. Altogether, this body of research suggests that relationships and social interactions with coworkers and friends facilitate vitality. Thus, I propose that relationships combining coworking with friendship— evident in nonwork socializing, self-disclosure, and personal growth relationship function with coworkers—are positively associated with vitality *at work*.³ Vitality at work is one way in which friendship with one's coworker may potentially result in different outcomes (i.e., those that are work-related in addition to personal outcomes) than friendships outside of work (which may have more general or personal outcomes and less work-related impact).

Resource Gain: Psychological Detachment

Third, I consider a cognitive mechanism capturing resource gain from friendship features in coworker relationships: psychological detachment from work. As indicated above, psychological detachment refers to "forget[ting] about work during nonwork time (Sonnentag et al., 2017, p. 368) and abstaining from both job-related activities and thoughts (Sonnentag, Niessen, & Neff, 2012). It is considered to be a cognitive recovery experience that allows one to "disengage oneself mentally from work" (Sonnentag & Fritz, 2007, p. 205). Of the four recovery experiences

³ As indicated in Appendix D, in Study 2, as supplemental data I collected vitality in one's personal life.

(the other three include relaxation, mastery, and control, Sonnentag & Fritz, 2007), psychological detachment is the only one that directly references work and is especially relevant as an outcome of nonwork self-disclosure and socializing with one's coworker as well as personal growth relationship function of one's coworker. This set of friendship features in coworker relationships may allow employees to escape work thoughts by focusing their attention and energy on the friendship interaction or relationship (i.e., the social activity in which they are participating, disclosure of personal information, or growing personally from the relationship), consistent with interaction ritual theory's emphasis on mutual attention and copresence (Collins, 2004). Because one's attention is focused on the social encounter with the coworker, rather than work-related activities or thoughts, this should allow one to detach from work. Moreover, leisure time during the evening, weekends, and time spent during work breaks have been studied as important recovery opportunities (Sonnentag et al., 2017) and detachment from work is a key recovery experience (Sonnentag & Fritz, 2007).

Prior research has found that *social* leisure activities, such as meeting up with friends, is considered to be a recovery activity that is positively associated with well-being (Sonnentag, 2001; Sonnentag et al., 2017), psychological detachment from work (Newman, Tay & Diener, 2014; Sonnentag, Arbeus, Mahn, & Fritz, 2014; ten Brummelhuis & Trougakos, 2014), recovery more broadly (Sonnentag & Natter, 2004) and less need to recover (Sonnentag & Zijlstra, 2006). Sonnentag and Fritz (2007) called for research to "put more emphasis on the social embeddedness of recovery" (p. 218). Research examining social antecedents of the recovery experience of psychological detachment have largely focused on relationship partners in the family domain, such as the employee's significant other. For example, being absorbed in joint activities with the significant other (Hahn et al. 2012), participation in relaxing or leisure activities with the

significant other (Park & Fritz, 2015; Park & Haun, 2017), and social support from others in the family domain, including significant others (Steed, Swider, Keem, & Liu, 2021) are positively related to psychological detachment from work. Relationships employees hold in their personal role, including friends, have received less attention in recovery research, yet friends are thought to represent another important relational partner that facilitates detachment (Hahn & Dormann, 2013). Again, employees are unlikely to be thinking about work while talking about their personal life, socializing outside of work, or growing in a personal capacity from spending time with a coworker. Altogether, I propose that nonwork self-disclosure, socializing with and personal growth functions of a coworker (i.e., friendship features) will facilitate psychological detachment from work by allowing employees to cognitively disengage from work thoughts and activities.

Hypothesized Effects of Friendship Features on Resource Drain

To reiterate, scholars have questioned whether leisure activities with coworkers always allows employees to fully separate themselves from work (e.g., Bakker et al., 2013; Endrejat et al., 2018; Sonnentag et al., 2017). For example, scholars noted that "individuals can talk about workrelated issues even when they meet friends during off-work time" (Bakker et al., 2013, p. 103) and that "friendship is experienced as a role and thereby becomes eligible for inter-role conflict" (Bridge & Baxter, 1992, p. 202). Taken together with interaction ritual theory, I would expect participating in activities and conversations with one's coworker, as well as growing personally from the coworker relationship may also be draining, which I operationalize as work-personal conflict and intrusion (Kreiner, Hollensbe, & Sheep, 2009).

Resource Drain: Work-Personal Conflict

Interrole conflict represents the negative side of work-nonwork spillover and has a longer history than work-nonwork enrichment. Greenhaus and Beutell (1985) conceptualized conflict between work and family roles as when pressures from work and family roles are incompatible, such that participation in the work (family) role makes it more difficult to participate in the family (work) role (i.e., WFC and FWC, respectively). Similar to work-nonwork enrichment research, work-nonwork conflict research has recently expanded beyond family as the only nonwork role. For example, Wilson and Baumann (2015) defined work-personal conflict as when demands, time, and strain from the work role impede participation in personal interests and activities and vice versa and examined this conflict in both work-to-personal (WPC) and personal-to-work (PWC) directions. Similarly, Fisher et al. (2009) conceptualized work-personal negative spillover as when personal life drains energy that takes away from work or when preoccupation with one's personal life makes it difficult to concentrate at work. Keeney and colleagues (2013) developed the notion of work-friendship conflict, which suggests that spending time with friends interferes with work time or creates strain that makes it more difficult to work, or that work makes it more difficult to partake in activities with friends. Such research concludes that employees' work and personal lives interfere with each other.

Prior theoretical research suggests a positive relationship between work friendships and interrole conflict (Pillemer & Rothbard, 2018). However, in Pillemer and Rothbard's (2018) theoretical model, it is unclear which specific interpersonal dynamics underpin these effects and which specific roles are affected. In contrast, prior research on work-family conflict has focused on the specific demands or expectations of work and family roles (e.g., Kopelman, Greenhaus, & Connelly, 1983; Greenhaus & Beutell, 1985). Wilson and Baumann (2015) suggested that friends can also be a source of demands external to the employee in the personal role, such that going to

a party with a friend is an example of a behavior occurring in the personal role. They speculated that personal roles "carry fewer costs of noncompliance" (Wilson & Baumann, 2015, p. 242) and that demands from the personal role have more variance than demands from family and work. For example, in the personal role, individuals have more discretion on how they spend time and energy, including with friends, compared to work or family roles. Thus, I focus on how coworker friendships influence conflict between the work and personal roles: whether nonwork self-disclosure and socializing, as well as personal growth relationship function of a coworker, drain employees of time and energy needed for their work and personal roles. That is, I expect friendship features in coworker relationships to be positively related to work-personal conflict.

Although research on work-personal conflict is still fairly new, emerging findings and theorizing provide support for this linkage. For example, Dumas and Perry-Smith (2018) found that the proportion of planned activities after work dedicated to leisure, including getting a drink or dinner with a friend or going to a gathering with a friend, was negatively associated with work absorption, which implies PWC (i.e., preoccupation with personal activities made it more difficult to participate in the work role, as noted above, Wilson & Baumann, 2015). Sonnentag and Bayer (2005) suggested that "some types of off-job activities might include deliberate preoccupation with job-related thoughts (e.g., when meeting friends and talking with them about work)" (p. 409), which implies WPC (i.e., work thoughts and conversations make it harder to engage in the personal role). Moreover, conversations with coworker friends may switch between personal and work-related topics (Marks, 1994) which may foster attention residue (i.e., being preoccupied with task A while participating in task B, Leroy, 2009, e.g., continuing to think about a work-related part of the conversation even after the conversation has moved on to personal topics) or even rumination (i.e., persistent, negative thoughts, including those about work, e.g., Wang, Liu, Liao, Gong,

Kammeyer-Mueller, & Shi, 2013). These are negative experiences that connect to strain between work and personal roles, suggesting there may be a switching cost when coworkers transition or oscillate between personal and work-related conversation or self-disclosure. Nonwork socializing with one's coworker (e.g., lunch, coffee, or happy hour, which likely occur on or during workdays) may cut into work time or drain energy needed to function in the work or personal role. Moreover, personal growth from one's relationship with a coworker, such as new perspective or skills in life (Colbert et al., 2016) may come at a sacrifice to one's professional growth or skills (resources are drained in the work role to generate resources in the personal role). In other words, increased personal role functioning (i.e., growth) may impair work role functioning, which connects to PWC.

Additional insight on the relationship between coworker friendship and work-personal conflict can be drawn from WFC research. For instance, Greenhaus and Beutell (1985) proposed that activities spanning across work and family boundaries contribute to WFC, along with incompatible expectations between work and family roles. In the CFR model, nonwork self-disclosure and socializing with coworkers and personal growth relationship function cross work and personal boundaries (i.e., they are nonwork features within a work-oriented relationship), and as discussed above, involve incompatible relational expectations (i.e., of work and personal roles). As reviewed previously, friends are expected to freely disclose personal information and socialize with one another in a personal or leisure setting, which may conflict with expectations in coworker relationships to exchange task-related information and instrumental assistance, as well as to maintain a boundary with the nonwork or personal role (e.g., Henderson & Argyle, 1986). Meta-analyses found positive associations between work role demands and WFC, between family role demands and family-to-work conflict (FWC) (Michel, Kotrba, Mitchelson, Clark, & Baltes, 2011) and between job involvement and both FWC and WFC (Byron, 2005). Considering these findings

and arguments, I propose that friendship features in coworker relationships are positively related to work-personal conflict.

Resource Drain: Perceived Intrusion

Lastly, I turn to perceived intrusion as a resource draining relational mechanism in the CFR model. Intrusion captures the notion that relationships become "too close for comfort" (Ehrhart & Ragins, 2019, p. 248). Employees are likely to perceive intrusion when their coworkers "intrude into their personal life" or when boundaries between their work and nonwork lives are not respected (Ehhardt & Ragins, 2019, p. 268; see also Ashforth, Kreiner, & Fugate, 2000; Kreiner et al., 2009; Nippert-Eng, 1996). Intrusion is closely connected to boundaries and their regulation (Ehrhardt & Ragins, 2019; Kreiner et al., 2009) and is expected to be important in coworker friendships that span work and personal domains (i.e., in which the work-personal boundary is less clear). As indicated above, Collins (2004) suggests individuals use interaction rituals to manage boundaries between different types of social roles and avoid intrusion.

Prior research has often focused on the boundary between work and family activities and what integrating them may look like, such as working from home or during vacation or leaving the office during work hours to attend a child's school activity (e.g., Kreiner et al., 2009; Peng, Ilies, & Dimotakis, 2011). Applying this notion to the CFR model, socializing with a coworker outside of work integrates personal life activities with one's work life. For example, going out to a nonwork-related dinner (a personal activity) with a coworker (a work relationship) brings work into the personal life because the co-participant of the activity (Collins, 2004) is from the work domain. This represents an intermingling of social boundaries (Ashforth et al., 2000) and as such may become vulnerable to intrusion or the disruption of boundaries between these social roles.

Personal growth from the relationship with a coworker similarly integrates a personal experience into the work domain. Receiving personal advice from a coworker, which may spark personal development or a new personal skill, may not always be desired and lead to the sense that the coworker relationship extends too far (i.e., intrudes) into the personal domain, especially when advice is unsolicited. In a related study, one participant described receiving advice from a friend about a breakup with her significant other as "a bit intrusive" and another participant was concerned about shame and embarrassment about receiving support from a friend (Floyd & Ray, 2017, p. 1269), which are negative experiences similar to intrusion. This sense of privacy violation (Floyd & Ray, 2017) may be even stronger when the advice comes from a coworker friend (vs. a friend outside of work). This ties to the finding that receiving undesired personal or instrumental support from a coworker relates to perceived intrusion (Ehrhardt et al., 2019). That is, advice from a coworker about something deeply personal is expected to feel intrusive and negative, even if such advice is accompanied by the overall positive experience of personal growth. Altogether, personal growth in a coworker relationship may facilitate a sense of intrusion.

Interestingly, early self-disclosure and interpersonal closeness scholars were also concerned with interpersonal privacy or distance (Altman, 1976; Altman, Vinsel & Brown, 1981). Westin (1970) noted that privacy is characterized by solitude, or not being observed or under the microscope of others, and reserve, which refers to "the creation of a psychological barrier against unwanted intrusion" (p. 32), which connects to work-nonwork boundaries. Furthermore, privacy intrusions are thought to occur when people believe that social norms of information collection are violated (Westin, 1970). Coworkers expect one another to maintain a boundary between their personal and professional lives as well as respect one another's privacy (Henderson & Argyle, 1986). Personal self-disclosure represents a violation of these expectations. Altman (1976)

characterized privacy and its intrusion "as an interpersonal event" (p. 11) and as a dialectic process that shifts across situations (see also Derlega, Winstead, & Greene, 2008), entailing forces that both pulls individuals closer together and pushes them apart, and that insufficient or excessive privacy is harmful. Individuals regulate their privacy with others using personal space as well as verbal and nonverbal behaviors (Altman, 1976), such as sharing personal information (i.e., selfdisclosure) (Khazanchi et al., 2018). Thus, nonwork self-disclosure with a coworker should also relate to perceived intrusion.

In sum, I propose the following effects of friendship features on resource gain and drain:

Hypothesis 1: The nonwork relationship function of personal growth will be positively related to resource gain [i.e., (a) work-personal enrichment, (b) vitality, and (c) psychological detachment] and drain [i.e., (d) work-personal conflict, and (e) intrusion].

- *Hypothesis 2: Nonwork self-disclosure with coworker* will be positively related to resource gain [i.e., (a) work-personal enrichment, (b) vitality, and (c) psychological detachment] and drain [i.e., (d) work-personal conflict, and (e) intrusion].
- *Hypothesis 3: Nonwork socializing with coworker* will be positively related to resource gain [i.e., (a) work-personal enrichment, (b) vitality, and (c) psychological detachment] and drain [i.e., (d) work-personal conflict and (e) intrusion].

Hypothesized Moderation

Prior research on coworker friendships has theoretically centered on the integration of work or instrumental features and friendship or affective features (i.e., the notion of multiplex relationships from the social network literature reviewed previously, e.g., Verbrugge, 1979), yet the degree of this integration has been unexplored. Moreover, given that coworker friendships integrate work and nonwork roles, individual differences or preferences regarding segmenting or integrating these roles would be expected to interact with friendship features.

In the first set of moderating hypotheses, I examine how friendship and work features interact to affect resource gain and drain after interaction rituals between coworkers (Collins, 2004). Toward this end, I develop illustrative scenarios in Figure 2 to cross friendship/affective and work-related/instrumental features. I specifically focus on the following work features as moderators: work-related relationship function of career advancement, work-related information-sharing, and task interdependence. I expect these work-related features to interact with the friendship features of nonwork relationship function of personal growth, nonwork self-disclosure with the coworker, and nonwork socializing with the coworker, respectively. Overall, I propose that work features will amplify effects outlined in Hypotheses 1-3, such that friendship features will be more strongly related to resource gain/drain when work features are high.

In the second set of proposed moderating effects, I theorize that individual differences namely, work-nonwork segmentation preferences and paradox mindset—will interact with friendship features in coworker relationships to influence resources gained or drained from friendship interaction rituals with their coworker. In contrast to work-related features, which are more contextual and external to the employee, individual differences are more internal. I elaborate on these two sets of moderators in turn below.

Moderating Effects of Work Features

In Figure 2, I cross work and friendship features, which results in four primary illustrative examples of coworker friendship. Specifically, I map the friendship features of (1) deep structure (the nonwork relationship function of personal growth) and surface structure, which comprises (2) nonwork self-disclosure with the coworker and (3) nonwork socializing, onto corresponding work

features of (1) the work-related relationship function of career advancement, (2) work-related information sharing and (3) task interdependence (see Figure 2). To briefly elaborate on the illustrative examples in Figure 2, first, coworker relationships in which instrumental features exceed affective features are considered to be work-dominant and those with higher affective features than instrumental features are considered to be friendship-dominant. In these instances, the coworker relationship would primarily revolve around working together (i.e., work-dominant) or sharing personal time and personal information (i.e., friendship-dominant). The highest degree of coworker friendship occurs when affective and instrumental features are closely intertwined and are both high. Coworker friendship is lowest when affective and instrumental features are both low; two individuals may be colleagues but not work closely or spend personal time together. They may share some personal information as part of small talk (e.g., at the start of meetings), but it is not a defining feature of their relationship. Overall, relationships with the highest degree of both coworking and friendship are expected to have the highest level of benefits as well as burdens or challenges Ι hypothesize below. as

		Friendship/Affective Features in Coworker Relationships 1. Personal growth relationship function of coworker 2. Nonwork self-disclosure with coworker 3. Nonwork activities with coworker Low	
Work/Instrumental Features in Coworker Relationships 1. Career advancement relationship function of coworker 2. Work-related information sharing 3. Task interdependence	High	Work-dominant relationship with coworker: Low integration, such that instrumental features are greater than affective features.	Highest degree of coworker friendship: High integration between work and personal, such that affective and instrumental features are both high.
		Lowest degree of friendship and relationship with coworker: Low integration of work and personal: affective and instrumental features are both low.	Friendship-dominant relationship with coworker: Low integration of work and personal: affective features are greater than instrumental features.

Figure 2: Crossing Work and Friendship Features in Coworker Relationships

Work-Related Relationship Function: Career Advancement

In Colbert and colleagues' (2016) typology, one of the primary work-related (i.e., instrumental) relationship functions that emerged was career advancement, which refers to when a coworker contributes an employee's career, such as "by providing advice or access to contacts and other career-related resources" (Colbert et al., 2016, p. 1203).⁴ For example, a coworker

⁴ The other work-related function that emerged was task assistance, defined as when a coworker makes it easier for an employee to complete their work, for example "by answering questions, providing feedback, or assisting with a specific task" (Colbert et al., 2016, p. 1203). The other nonwork or personal function was friendship. Because I focus on breaking out the distinct features of friendship, I do not include Colbert and colleagues' (2016) conceptualization of it in the CFR model. The other two relationship functions from Colbert et al. (2016) include emotional support and giving to others, which do not directly reference one's personal or work life and can thus apply to either domain. However, as supplemental data in Study 2, I collected the relationship functions of task assistance, friendship, emotional support, and giving to others.

relationship serves a career advancement function when an employee and their coworker discuss the employee's future with the organization (whether to accept an offer at another organization, leave the organization to pursue a graduate degree, or stay in the organization) and when a coworker offers to help an employee find another job, including by offering to make an introduction to the colleague's personal connections (Colbert et al., 2016). Omilion-Hodges and Baker (2013) similarly found that coworkers can be a source of career advancement resources (e.g., making connections between the coworker and others in the organization, speaking highly of the coworker). These findings are consistent with Kram and Isabella's (1985) typology of peer relationships reviewed above, in which a collegial peer relationship is characterized by "career strategizing" and helping one another find opportunities to professionally advance. In other words, coworkers may act as peer mentors who help develop and grow one another's careers.

Moreover, coworkers are expected to exchange help at work (Henderson & Argyle, 1986) and helping is often reciprocated (Lyons & Scott, 2012). Given this, the career advancement relationship function may help employees generate resources that improves their functioning in the work role. Colbert and colleagues (2016) note that highlighting the career advancement (as well as personal growth) function "shifts the focus from coping with adversity to supporting growth and development" (p. 1200). That is, instrumental support (i.e., task assistance) and emotional support functions are oriented around coping, whereas career advancement and personal growth are oriented around development. The personal growth and career advancement relationship functions capture the notion that the coworker contributes to growth and development. The career advancement function specifically is consistent with Aristotle's (2014) work suggesting that friendships can be a source of utility (i.e., help individuals achieve their goals, and in this case, their professional or career-related goals). In contrast to the personal growth relationship function,

the career advancement function captures how a coworker helps the employee with their career (versus with their personal life) (Colbert et al., 2016).

As indicated in Figure 2, the highest level of coworker friendship occurs when career advancement and personal growth relationship functions are both high—that is, when employees help develop one another across both their personal and professional lives (i.e., when boundaries are most blurred, Colbert et al., 2016). I would expect the career advancement relationship function to intensify the relationship between the personal growth relationship function on resource gain and drain (i.e., one's coworker helping personally and professionally offers greater opportunity for benefits as well as burdens in terms of resources). However, I expect the career advancement function to weaken or impair the positive effect of personal growth on psychological detachment (i.e., it is harder to detach from work when one's coworker assists so widely across multiple domains of one's life).

Hypothesis 4: The work-related relationship function of career advancement will moderate the positive relationships between the *nonwork relationship function of personal growth* and resource gain [i.e., (a) work-personal enrichment, (b) vitality] and resource drain [i.e., (c) work-personal conflict, and (d) intrusion], such that these relationships will be stronger when the career advancement function is higher rather than lower. The career advancement function will moderate the positive relationship between personal growth function and (e) psychological detachment, such that this relationship will be weaker when the career advancement function is higher rather than lower.

Work-Related Information Sharing

Next, work-related information refers to communication about work tasks (Mesmer-Magnus & DeChurch, 2009). Examples of sharing work-related information include "inform[ing] one another of key developments" on work activities (Bunderson & Sutcliffe, 2002), discussing the task (Jehn & Shah, 1997), and disseminating information to newcomers about how to do the task or what to expect in the role (Morrison, 1993; Ostroff & Kozlowski, 1992). As reviewed above, coworker and instrumental relationships are key sources of work-related information (Gibbons, 2004; Kram & Isabella, 1985; Ostroff & Kozlowski, 1992). Work-related information sharing is distinct from personal information sharing (i.e., nonwork self-disclosure) (Nifadkar, Wu, & Gu, 2019). Following interaction ritual theory (Collins, 2004), in coworker relationships where nonwork- and work-related information sharing are both high, the information shared can indicate presence of both a friendship and a work-oriented relationship (Figure 2). That is, coworkers who work closely together *and* are close friends share a high degree of work *and* personal information. In all, I generally expect the effect of nonwork self-disclosure on resource gain and drain to be stronger when work-related information sharing is high (vs. low).

Work-related information sharing appears to strengthen the relationships between team processes and performance (Aubé, Brunelle, & Rousseau, 2014) and information shared by others at work including peers is positively related to performance (Bunderson & Sutcliffe, 2002; Cummings, 2004; Mesmer-Magnus & DeChurch, 2009; Nifadkar et al., 2019), interpersonal cohesion and cooperation (Elias, Johnson, & Fortman, 1989; Mesmer-Magnus & DeChurch, 2009), and job attitudes (Sias, 2005). In addition, Geunter, van Emmerik, and Scheuers (2014) proposed that delayed information sharing from a coworker will elicit negative affect and subsequent interpersonal deviance toward that coworker, as well as less satisfaction with them. Altogether, given that work-related information sharing appears to hold positive implications, I would expect it to amplify the benefits of nonwork self-disclosure on work-personal enrichment and vitality. However, most research on work-related information sharing has not simultaneously examined nonwork self-disclosure. Both types of information (work and personal) concurrently flowing within a coworker relationship may make it more difficult for employees to psychological detach from work and might also amplify the effects of nonwork information sharing on work-personal conflict and intrusion (due to the strain of switching back and forth conversationally between work and personal domains, as suggested above).

Hypothesis 5: Work-related information sharing will moderate the positive relationships between nonwork self-disclosure with coworker and resource gain [i.e., (a) work-personal enrichment, (b) vitality] and resource drain [i.e., (c) work-personal conflict, and (d) intrusion], such that these relationships will be stronger when work-related information sharing is higher rather than lower. Work-related information sharing will moderate the positive relationship between nonwork self-disclosure with coworker and (e) psychological detachment, such that this relationship will be weaker when work-related information sharing is higher rather than lower.

Task Interdependence

Coworkers are considered be "task interdependent when they must share materials, information, or expertise in order to achieve the desired performance or output" (Van der Vegt, Emans, & Van de Vliert, 2001, p. 52). Broadly, interdependence is a property of interpersonal relationships (Rusbult & Van Lange, 2003), including coworker relationships and friendships as discussed above. *Task* interdependence specifically is a "structural feature" of relationships in the

workplace (Pearce & Gregersen, 1991, p. 843). Moreover, Jehn and Bendersky (2003) observed that "task interdependence increases the amount and intensity of interaction among members" of a group (p. 215). As such, task interdependence is an important indicator of the prominence of work features in coworker relationships; coworkers who depend on each other to do their work (Pearce & Gregersen, 1991) suggests that they are critical components of each other's work lives (Puranik et al., 2019). Whereas task interdependence indicates an instrumental relationship coworkers depend on each other to do their work—nonwork socializing indicates a friendship coworkers spend time with each other in a nonwork setting. As suggested in Figure 2, high integration between task interdependence and nonwork socializing with a coworker indicates the relationship is characterized by a high degree of coworker friendship.

Prior research suggests that task interdependence is frequently supported as a moderator, including strengthening effects of team processes (e.g., goal commitment, autonomy, and cohesion) (Aubé & Rousseau, 2005; Bachrach, Powell, Collins, & Richey, 2006; Gully, Devine, & Whitney, 2012; Langfred, 2005; Liden, Wayne, & Bradway, 1997) on performance, as well as the effects of interpersonal aggression and boastfulness on psychological well-being (Aubé, Rousseau, Mama, & Morin, 2009) and deviance (Hershcovis, Reich, Parker, & Bozeman, 2012). It can be concluded from this body of research that task interdependence strengthens the effect of social dynamics. Although these studies have focused on task interdependence in work groups or teams, I consider task interdependence in coworker relationships and posit that task interdependence will strengthen the impact of nonwork socializing on work-nonwork enrichment and conflict as well as vitality and intrusion. Given the nature of psychological detachment (i.e., absence of work thoughts while not working; Sonnentag et al., 2012), high work-related interdependence (i.e., coworkers closely collaborate at work) would be expected to inhibit

detachment following socializing with a coworker. That is, I expect task interdependence to weaken the positive effect of nonwork socializing on detachment.

Hypothesis 6: Task interdependence will moderate the positive relationships between *nonwork socializing with coworker* and resource gain [i.e., (a) work-personal enrichment, (b) vitality] and resource drain, [i.e., (c) work-personal conflict, and (d) intrusion], such that these relationships will be stronger when task interdependence is higher rather than lower. Task interdependence will moderate the positive relationship between nonwork socializing with coworker and (e) psychological detachment, such that this relationship will be weaker when task interdependence is higher rather than lower.

Moderating Effects of Individual Differences

In addition, I expect individuals' preferences and mindset to influence whether they are more or less likely to experience resource gain and drain from friendship interaction rituals with a coworker. Specifically, I argue that individuals are inclined to experience more benefits and fewer costs of being friends with a coworker when they prefer to blend their work and personal roles (i.e., preference for work-nonwork integration; Kreiner, 2006) and when they embrace contradictory tensions (i.e., paradox mindset; Miron-Spektor, Ingram, Keller, Smith & Lewis, 2018)—that is, resource or energy gain will be greater and resource drain (Collins, 2004) will be lower when the relationship with a coworker is consistent with one's ideal or preferred way of living their life. Overall, I extend IRT by elaborating on what may predispose individuals to be energized or drained from friendship social interactions with a coworker.

In the next set of hypotheses, I specifically focus on the moderating role of work-nonwork segmentation preferences for work-personal conflict and enrichment and psychological detachment from work, given that these independent variables revolve around the transfer of energy or resources across domains. I also concentrate on surface structure—nonwork self-disclosure and socializing with the coworker—which are behaviors and may vary, whereas deep structure is a more general, stable indicator of the relationship.

Work-Nonwork Segmentation Preferences

First, an important individual difference relating to work-nonwork dynamics is worknonwork segmentation preferences (Allen, Cho, & Meier, 2014), defined as "a person's desire to separate work and home domains" (Kreiner, 2006, p. 486). Segmentation captures a preference for keeping these domains separate, whereas integration captures a preference for intermingling them (Kreiner, 2006; Nippert-Eng, 1996). In other words, people have a specific level of segmentation or integration they prefer to maintain between their work and personal roles, on average. ⁵ Nippert-Eng (1996) found that individuals who prefer to segment avoid cross-domain talk (e.g., talking with a friend about work or sharing personal information with a coworker) whereas those who prefer to integrate embrace cross-domain conversation topics and invite colleagues into their home. This may suggest that individuals who prefer to segment work and nonwork domains may have fewer coworker friendships (if any at all). By distinguishing between the friendship features in coworker relationships, I examine how even a small degree of friendship features in coworker relationships (e.g., during a meeting with the coworker, sharing one's recent weekend experiences

⁵ Integration/segmentation preferences are distinct from the degree of integration itself (e.g., Desrochers, Hilton, & Larwood, 2005). Considering that coworker friendships, by nature, integrate work and personal roles as previously discussed, *preference* for integration/segmentation is more relevant to the CFR model.

or personal events) may affect resource gain/drain and the moderating role of a preference to segment vs. integrate work and nonwork roles. Interaction ritual theory would suggest that coworker friendship occurs when a social interaction such as self-disclosure or socializing reflects both a peer work and personal relationship (Collins, 2004). Individuals who prefer to integrate their work and personal roles, which include the relationships they maintain within them (e.g., friends in the personal role, Wilson & Baumann, 2015), would be expected to have more to gain in terms of resources from a coworker friendship, as this relationship integrates work and personal roles and is therefore consistent with their preference. In contrast, individuals who prefer to segment these roles stand more to lose and less to gain in terms of resources, as coworker friendship would contradict their preference.

This ties to how Dumas and Sanchez-Burks (2015) emphasized the importance of "the match or fit between an individual's desired boundary management strategy and the context—and the extent to which they integrate or segment—drives.... Conflict or harmony between employees' personal and professional life domains" (p. 818). Similarly, Kreiner (2006) found that congruence between preferred and actual degree of segmentation was associated with less work-home conflict and less stress as well as greater job satisfaction. Moreover, Carmeli and Russo (2016) proposed that individuals with a preference for work-home integration stood the most to gain in terms of thriving at work and at home. In their person-centered study of boundary management, Kossek and Lautsch (2012) found that individuals with high control over their work-family boundary management, in terms of enacting segmentation or integration, reported lower WFC, FWC, and psychological distress. This further supports the idea that work-nonwork segmentation preferences are important when considering the relationship between friendship features and work-nonwork conflict and enrichment as well as detachment. Overall, I expect that the preference for integration

(which matches the work-personal integration that occurs when coworkers disclose personal information or socialize) will amplify the positive effects on work-personal enrichment and detachment and weaken the negative effects of work-personal conflict. In contrast, a preference for segmentation (inconsistent with disclosing personal information and socializing with a coworker) will weaken the positive effects on work-personal enrichment and detachment and amplify the negative effects on work-personal conflict.

Hypothesis 7: Work-nonwork segmentation preferences will moderate the relationships

between *nonwork self-disclosure* with coworker and work-nonwork enrichment and conflict as well as with detachment such that (a) the positive relationship between nonwork self-disclosure with coworker and workpersonal enrichment will be stronger, (b) the positive relationship between nonwork self-disclosure with coworker and detachment will be stronger, and (c) the negative relationship between nonwork self-disclosure with coworker and work-personal conflict will be weaker, when a preference for work-nonwork integration is higher rather than lower.

Hypothesis 8: Work-nonwork segmentation preferences will moderate the relationships between nonwork socializing with coworker and work-nonwork enrichment and conflict as well as with detachment such that, (a) the positive relationship between nonwork socializing with coworker and work-personal enrichment will be stronger, (b) the positive relationship between nonwork socializing with coworker and detachment will be stronger, and (c) the negative relationship between nonwork socializing with coworker

and work-personal conflict will be weaker, when a preference for worknonwork integration is higher rather than lower.

Paradox Mindset

Paradox is defined as the intersection of "contradictory yet interrelated elements" (Lewis, 2000, p. 760) that are "oppositional to one another yet are also synergistic" (Smith & Lewis, 2011, p. 386). A classic example of a social paradox relevant to the CFR model is "the paradox of disclosure" during group formation (Smith & Berg, 1987, p. 640). This paradox states that in order for members of a group to define their roles in the group and for the group to function and meaningfully coalesce, members need to disclose "who they are" and "what they are willing to invest in the group;" however, only by the group coming together and learning its identity will members know what they should disclose about themselves (Smith & Berg, 1987, p. 640). The paradoxical implication is that group members will hesitate to disclose information about themselves and this will impede the group's knowledge about itself and its members, which perpetuates this cycle (Smith & Berg, 1987).

Tensions, which refer to "cognitively and/or socially constructed polarities," are theorized to underlie the notion of paradox (Lewis, 2000, p. 761). An example tension related to my focus on friendship is the statement "I look forward to our time spent together, but it means I often fall behind in my work obligations" which Ingram and Zou (2008) suggest "explicitly constructs a tension between integration and separation" (p. 182). In other words, a tension exists when one enjoys socializing with a coworker, yet this also negatively affects one's work. Another related set of tensions are those surrounding belonging (i.e., simultaneously focusing on one's own and others' needs, needing to help others while helping oneself, cooperating and competing with others) (Miron-Spektor et al., 2018). For instance, on one hand, coworker friends may attend to

one another's needs by socializing outside of work, disclosing personal information, and helping each other grow as people. Yet on the other hand, they might need to attend to their own individual personal and job-related needs and may also compete for job promotions, considering their hierarchical similarity as peers (Sias et al., 2004).

Paradox and tensions are relevant to inquiry on coworker friendships, given that they are "inherent to groups" (Murnighan & Conlon, 1991). Coworker friendships represent the integration of divergent but interdependent elements or features—instrumental and affective—in the smallest type of group (i.e., dyad) and are a source of tension between work and personal roles (Bridge & Baxter, 1992; Ingram & Zou, 2008; Methot et al., 2016). Thus, the notion of paradox is well-suited to understanding the effects of friendship features between coworkers (i.e., nonwork self-disclosure and socializing) on resource gain (which ties to the synergy aspect of paradox) and drain (which ties to opposing forces and polarity aspect of paradox).

Paradox scholars recently suggested that individuals differ in their ability to reconcile and benefit from competing tensions, reflected in the notion of paradox mindset. Individuals with a high paradox mindset are "energized by tensions" (Miron-Spektor et al., 2018, p. 26) rather than drained by them, which relates to Collins' (2004) description of increased energy stemming from interaction rituals. Paradox mindset is characterized by "treating competing demands as opportunities... and confront[ing] conflict in a constructive manner to stimulate understandings" (Waldman, Putnam, Miron-Spektor, & Siegel, 2019, p. 2). In other words, interaction ritual theory would suggest that individuals with a paradox mindset would be more likely to be energized by a relationship in which work and friendship components coexist. Recent research suggests that paradox mindset is associated with optimism and persistence when pursuing a course of action (Sleesman, 2019) as well as with innovative behavior (Liu, Xu, & Zhang, 2020). Moreover, MironSpektor and colleagues' (2018) work demonstrates that paradox mindset strengthens the effect of experiencing tensions (e.g., having contradictory goals or requirements) on innovation and in-role job performance. This finding supports the notion that a high paradox mindset allows one to benefit from the experience of tensions (such as those in a coworker friendship). Taken altogether, individuals with a paradox mindset would be expected to more easily reap the benefits and minimize the costs of nonwork interaction rituals (i.e., nonwork self-disclosure and socializing) with their coworker by being more comfortable with or energized by the inherent tensions from blending nonwork behaviors into work-oriented relationships.

- *Hypothesis 9:* Paradox mindset will moderate the relationships between *nonwork selfdisclosure with coworker* and resource gain and drain, such that (a) the positive relationship between nonwork self-disclosure with coworker and vitality at work will be stronger and (b) the positive relationship between nonwork self-disclosure with coworker and intrusion will be weaker, when paradox mindset is higher rather than lower.
- *Hypothesis 10:* Paradox mindset will moderate the relationships between *nonwork socializing with coworker* and resource gain and drain, such that (a) the positive relationship between nonwork socializing with coworker and vitality at work will be stronger and (b) the positive relationship between nonwork socializing with coworker and intrusion will be weaker, when paradox mindset is higher rather than lower.

Hypothesized Mediation

Building from Hypotheses 1-3, I now turn to proposed mediating effects of resource gain and drain. As I argue below, resource gain and drain processes are expected to mediate the effects of friendship with a coworker on work behaviors, well-being, and relationship conflict, as shown in Figure 1. Coworker friendships integrate work and personal roles and may ultimately influence individuals' work behaviors, well-being, and relationship with the coworker (i.e., work and personal domains). Below, I elaborate on each downstream outcome, then turn to developing arguments for the indirect effect hypotheses.⁶

First, Collins (2004) suggests that participation in interaction rituals in the work domain is linked with greater work motivation. Thus, I examine work performance behaviors, including adaptive performance, which "reflects the degree to which individuals cope with, respond to, and/or support changes that affect their roles as individuals" (Griffin, Neal, & Parker, 2007, p. 331) and helping behaviors, which is an "affiliative type of citizenship behavior" (Van Dyne & LePine, 1998, p. 109). Both of these behaviors are considered to be aspects of job performance (Dorsey, Cortina, & Luchman, 2009) that are discretionary (Van Dyne, Cummings, & Parks, 1995; Williams & Anderson, 1991) and go beyond in-role performance (i.e., they are extra-role) (Griffin et al., 2007; LePine & Van Dyne, 1998; Pulakos, Arad, Donovan, & Plamondon, 2000).

Second, prior research suggests that the quality of coworker relationships and interactions are positively related to helping others at work (Chen et al., 2013; Chiaburu & Harrison, 2008; Halbesben & Wheeler, 2015; Kamdar & Van Dyne, 2007). In addition, Methot et al. (2016) found that multiplex network size had a positive direct effect on task performance. Resource fluctuations (Gabriel, Koopman, Rosen, & Johnson, 2018; Trougakos, Beal, Cheng, Hideg, & Zweig, 2015) as well as other internal states such as affect (Ilies, Scott, & Judge, 2006; Lee & Allen, 2002), which relate to resource processes, have been linked to helping. Adaptive performance unfolds within and is impacted by relational contexts, such as work groups or teams (Chen, Thomas, & Wallace,

⁶ Although I do not formally hypothesize moderated mediation effects, I tested these in supplemental analyses in Study 2 for paths with significant effects and interactions.
2005; Jundt, Shoss, & Huang, 2015) and is related to and thought to arise from self-regulation processes affecting interpersonal interactions (i.e., sociability in managers, Huang, Ryan, Zabel, & Palmer, 2014), stress (Pulakos, Schmitt, Dorsey, Arad, Borman, & Hedge, 2002), and resources (Niessen & Jimmieson, 2016). Given the focus of the CFR model on resource processes as a result of coworker friendship, adaptive performance and helping behaviors are important work performance outcomes to examine.

Next, Collins (2004) argues that "the individual feels moral when he or she is acting with the energy" from interaction rituals and can more easily differentiate between "what is good... [and] what is evil" (p. 39-40), suggesting a connection between emotional energy and ethical behaviors. This is consistent with the notion that work friendships constrain unethical behavior (Brass et al., 1998) and that friendships can be a source of moral virtue (Aristotle, 2014). Given this, I examine unethical behavior to help the coworker, defined as immoral acts intended to aid one's teammate in the organization (Umphress, Gardner, Stoverink, & Leavitt, 2020; see also Umphress, Bingham, & Mitchell, 2010, who examined the organization as the beneficiary). This is a unique form of unethical behavior in that its intent is positive (i.e., oriented around helping) and other-oriented (vs. self-interested), yet the behavior itself is negative (i.e., immoral) (Umphress et al., 2010; Umphress et al., 2020). Unethical behavior to help one's coworker is therefore a dysfunctional form of helping. Peers and others at work have been theorized to influence unethical behavior to help the organization (UPB) (Umphress & Bingham, 2011) and unethical behavior in organizations more broadly-a linkage that is supported by meta-analytic effects of social consensus and ethical climates on unethical behavior (Kish-Gephart, Harrison, & Treviño, 2010). Internal processes relating to resource drain, such as negative activated mood, are positively related to unethical behavior to help a teammate (Umphress et al., 2020) as well as unethical behavior and

ethical decision-making more broadly (Gino, Schweitzer, Mead, & Ariely, 2011; Lee & Gino, 2015; Welsh & Ordóñez, 2014). Additionally, social exchange with others in the organization (Umphress & Bingham, 2011) and identification with the organization (Chen, Chen, & Sheldon, 2016; Umphress et al., 2010) are positively associated with UPB. Given that unethical behavior appears to stem from workplace social dynamics and internal states, it is relevant to interaction rituals between coworker friends as well as resource drain processes and is therefore another critical work behavior to include in the CFR model.

Turning to nonwork or personal outcomes, I first consider an indicator of well-being: life satisfaction, which refers to the global judgment of one's current life (Diener, Suh, Lucas, & Smith, 1999) relative to an internal standard (Diener, Emmons, Larsen, & Griffin, 1985). Life satisfaction is considered to be a component of subjective well-being (the other two components include high positive and low negative affect; Diener et al., 1999). Leisure satisfaction has a positive meta-analytic relationship with subjective well-being (Kuykendall, Tay, & Ng, 2015) and coworker satisfaction is also positively related to life satisfaction (Simon et al., 2010). Life satisfaction is a logical outcome of energy gain specified by interaction ritual theory (Collins, 2004) and is therefore important to include in the CFR model.

Lastly, Collins (2004) argues that interaction rituals play a key role in interpersonal conflict and solidarity. Thus, I examine relationship conflict, which refers to "interpersonal incompatibilities" surrounding "nontask issues" (Jehn & Bendersky, 2003, p. 200). Satisfaction with team members and relationship conflict are negatively and meta-analytically related (De Dreu & Weingart, 2003). Relationship conflict and related behaviors such as social undermining and incivility comprise key streams of research on coworker relationships (Lanaj et al., 2018; Nifadkar & Bauer, 2016; Ng & Wang, 2019; Scott, Ingram, Zagencyzk, & Shoss, 2014; Venkataramani & Dalal, 2007), as reviewed above. Thus, relationship conflict is expected to be a key relational outcome of coworker friendships.

Overall, I expect resource gain and drain mechanisms outlined previously to mediate the effects of friendship features on the aforementioned work behaviors, well-being, and relational outcomes.⁷ In general, I expect resource gain (work-personal enrichment, vitality, and psychological detachment from work) to be the primary mediating pathways to beneficial or positive outcomes (helping behaviors, adaptive performance, and life satisfaction) and resource drain (work-personal conflict and intrusion) to be the primary mediating pathways to harmful or negative outcomes (unethical behavior to help the coworker and relationship conflict).⁸



Resource Gain Mechanisms

Figure 3: Summary of Proposed Resource Gain Mediation

⁷ Given concerns regarding mediation in experimental designs (Spencer, Zanna, & Fong, 2005), I do not formally hypothesize and test mediation in the experiment (Study 1). Thus, I propose mediation only for friendship features comprising surface structure, tested in Study 2. However, in supplemental Study 1 analyses I tested measurement-of-mediation (Shrout & Bolger, 2002).

⁸ As indicated in the Results section, I examined a saturated structural equation model that controls for the effects of resource gain on negative outcomes and resource drain on positive outcomes.

Figure 3 illustrates the proposed indirect effects of friendship features in coworker relationships on my focal downstream outcomes via resource gain pathways. I propose that work-personal enrichment and vitality at work will mediate the effects of nonwork self-disclosure and socializing with one's coworker on the beneficial outcomes of helping others at work, adaptive performance, and life satisfaction. Given that psychological detachment relates to distancing oneself from work, for this pathway, I focus on personal and relational outcomes, namely, life satisfaction and relationship conflict.

In regard to the first resource gain pathway—work-personal enrichment—multiple metaanalyses have found positive linkages from WFE (McNall et al., 2010; Zhang, Xu, Jin, & Ford, 2018) and FWE to life satisfaction and psychological well-being more broadly (Zhang et al., 2018). That is, in general, enrichment between work and nonwork domains contributes to life satisfaction. In terms of work-personal enrichment, empirical evidence suggests that work-to-leisure and leisure-to-work enrichment was positively related to life satisfaction (Knecht et al., 2016). Personal-to-work enrichment (PWE) was associated with life satisfaction specifically (Fisher et al., 2009) as well as positive well-being (i.e., feeling content and optimistic, which ties to life satisfaction) (Allis & O'Driscoll, 2008). Additionally, Colbert et al. (2016) found that the relationship function of personal growth, which connects to work-personal enrichment as discussed above, was the dominant predictor of life satisfaction.

The linkage between work-nonwork enrichment and performance was central to early enrichment theory; social and psychological resources generated in one domain are expected to facilitate performance in the other domain (Greenhaus & Powell, 2006). Given this, work-personal enrichment arising from nonwork self-disclosure and socializing with a coworker are expected to generate resources that allow individuals to adapt more easily to job demands and have greater capacity to give to others (see also ten Brummelhuis & Bakker, 2012). Empirical research also supports the connection between enrichment and performance; Zhang and colleagues' (2018) meta-analysis revealed that WFE is related to citizenship (which comprises helping) and both WFE and FWE are associated with in-role job performance. Other research found that FWE was positively related to supervisor-rated promotability (Paustian-Underdahl et al., 2016) and work engagement (ten Brummelhuis, Haar, & Roche, 2014; Timms et al., 2015), which is metaanalytically linked to helping (Christian, Garza, & Slaughter, 2011). In a study of couples, van Steenbergen, Kluwer, and Karney (2014) found that WFE was followed by enjoyable, constructive, and active participation in social interactions between partners, indicating that enrichment is tied to positive relational dynamics in the receiving domain(s) (i.e., family domain). Helping behaviors are a prominent form of positive social interactions between coworkers and occur in the work domain (Chiaburu & Harrison, 2008). Integrating these findings from prior research with Hypotheses 2a and 3a, I expect work-personal enrichment to mediate the effect of friendship encounters with a coworker on helping behaviors, adaptive performance, and life satisfaction. In sum, I propose that:

Hypothesis 11: Work-personal enrichment will mediate the relationships between *nonwork self-disclosure with coworker* and (a) helping behaviors, (b) adaptive performance, and (c) life satisfaction.

Hypothesis 12: Work-personal enrichment will mediate the relationships between *nonwork socializing with coworker* and (a) helping behaviors, (b) adaptive performance, and (c) life satisfaction.

Turning to vitality as the next resource gain pathway, research suggests that vitality and thriving at work are positively related to life satisfaction (Flinchbaugh, Luth, & Li, 2015; Kasser

& Ryan, 1999; Ryan & Frederick, 1997; Zhai, Wang, & Wheadon, 2020) and that vitality at work relates to thriving outside of work (Porath et al., 2012), which captures a broad appraisal of one's life beyond work, similar to life satisfaction. Moreover, Shirom (2007) posited that emotional energy, which relates to vitality as discussed above, fosters life satisfaction. Combining these arguments and findings with the hypothesized main effects of friendship features on vitality (Hypotheses 2b and 3b) suggests that vitality mediates the effect of friendship features—nonwork self-disclosure and socializing with a coworker—on life satisfaction. That is, I predict that these friendship features are energizing (Collins, 2004) in the form of vitality, which in turn contributes to positive subjective judgments about one's life.

Revisiting the idea that vitality represents the affective facet of thriving (Spreitzer et al., 2005) and energy is characterized by positive activation (Remington et al., 2000), research suggests that "positive emotions... induce a focus on others and others' needs" (van Steenbergen et al., 2014). This logic is grounded in broaden-and-build theory, which suggests that positive affect generates greater efficiency, flexibility, and creativity (Fredrickson, 2001). Thus, it would be reasonable to conclude that vitality promotes a focus on others in terms of helping as well as greater adaptation to one's work environment. These relationships have been empirically supported. One study found that energizing others was positively related to performance because people who feel energized by others are more likely to give discretionary effort toward those who energized them (Baker, Cross, & Wooten, 2003). Other studies revealed positive effects of vitality and thriving on helping (Ehrhardt & Ragins, 2019; Frazier & Tupper, 2018), performance (Gerbasi, Porath, Parker, Spreitzer, & Cross, 2015; Owens et al., 2012), career adaptability (Jiang, 2017) and innovative or creative work behaviors (Carmeli & Spreitzer, 2009; Kark & Carmeli,

2009), which collectively connect to adaptive performance and helping. This is consistent with Spreitzer and Sutcliffe's (2007) observations that "thriving serves an adaptive function that helps individuals navigate and change their work contexts in order to promote their own development" (p. 77) and that "individuals who feel more energized at work... will expend more effort" (p. 78). Integrating these arguments with part b of Hypotheses 2 and 3, I propose that vitality will mediate the effects of friendship features with a coworker on the positive outcomes of life satisfaction, adaptive performance, and helping.

- Hypothesis 13: Vitality will mediate the relationships between nonwork self-disclosure with coworker and (a) helping behaviors, (b) adaptive performance, and (c) life satisfaction.
- *Hypothesis 14:* Vitality will mediate the relationships between *nonwork socializing with coworker* and (a) helping behaviors, (b) adaptive performance, and (c) life satisfaction.

The third resource gain pathway, psychological detachment, is expected to be particularly important for personal and relational (versus work) outcomes, given that this recovery experience is focused on the degree to which employees separate themselves from work during nonwork time (Sonnentag & Fritz, 2007). I also focus on personal and relational outcomes and not work outcomes because the impact of detachment on performance has been inconsistent (Sonnentag et al., 2017) and one study found a curvilinear relationship with work behaviors, such that high detachment made it difficult for individuals to return to "work mode" which held negative implications for performance (Fritz, Yankelevich, Zarubin, & Barger, 2010).

While nonwork socializing would typically by nature occur outside of the workplace or work context, nonwork self-disclosure with a coworker is often blended into work conversations or contexts (Hinds & Cramton, 2014) and would be less likely to facilitate personal and relational outcomes to the same degree that nonwork socializing would do so. Altogether, I focus on psychological detachment as a mediator (Bennett, Bakker, & Field, 2018; Sonnentag & Fritz, 2015) between nonwork socializing with the coworker and the personal and relational outcomes of life satisfaction and relationship conflict. Meta-analyses suggest that detachment is positively related to psychological well-being and life satisfaction (Steed et al., 2021). Thus, detachment is expected to transmit the effects of nonwork socializing with a coworker on life satisfaction.

In terms of relational effects, Sonnentag and colleagues (2012) speculated that "is it reasonable to assume that well-recovered employees and supervisors have a positive influence on social interaction processes at work" (p. 878). In other words, employees who psychologically detach from work should be able to get along better with others, including the coworker with whom they may have spent time outside of work. While relational outcomes of psychological detachment have received less attention, recent studies indicate that detachment is negatively related to social undermining toward one's significant other (Meier & Cho, 2019) and difficulty detaching from work is positively associated with hostility toward one's coworker (Ng & Wang, 2019). As reviewed above, incivility and social undermining connect to features of relationship conflict as they capture social tension unrelated to work tasks. Detachment appears to contribute to positive mood (Sonnentag, Mojza, Binnewies, & Scholl, 2008; Sonnentag & Bayer, 2005), which may stave off relationship conflict. Taken with Hypothesis 3c, I propose that:

Hypothesis 15: Psychological detachment from work will mediate the relationships between nonwork socializing with coworker and (a) life satisfaction and (b) relationship conflict with coworker.

Resource Drain Mechanisms



Figure 4: Summary of Proposed Resource Drain Mediation

Figure 4 shows the hypothesized indirect effects of friendship features in coworker relationships on key negative downstream outcomes via resource drain pathways. At indicated at the outset of this section, I specifically propose that work-personal conflict and intrusion will mediate the effects of nonwork self-disclosure and socializing with one's coworker on the harmful outcomes of unethical behavior to help the coworker and relationship conflict.

First, research suggests that work-nonwork conflict—the first resource drain pathway in the CFR model—holds a variety of negative implications for employees. For example, Wilson and Baumann (2015) found that PWC was associated with greater counterproductive work behaviors and less satisfaction of relatedness needs, which supports my theorized connection between workpersonal conflict and subsequent unethical behavior and relationship conflict. Other evidence for this this linkage includes research showing the effects of work-nonwork conflict on negative social interactions—which connect to relationship conflict—in both work and nonwork domains. Specifically, WFC is positively related to anger and withdrawal in marital relationships (van Steenbergen et al., 2014), feelings of hostility at home (Judge, Ilies, & Scott, 2006), social undermining toward one's partner (Bakker, Demerouti, & Dollard, 2008) and toward one's coworkers (Scott et al., 2015), while FWC is associated with increased abusive supervision (Courtright, Gardner, Smith, McCormick, & Colbert, 2016), feelings of hostility at work (Judge et al., 2006), and conflict with one's partner (Sanz-Vergel, Rodríguez-Muñoz, & Nielsen, 2015). This body of research suggests that work-nonwork conflict seeps into social interactions and oftentimes, relational partners in the originating (vs. receiving) domain are the most likely to be negatively affected (i.e., which ties to the source attribution perspective on work-family conflict, Shockley & Singla, 2011). When work-personal conflict arises from nonwork self-disclosure and socializing with a coworker, the coworker is likely to be "blamed" and to become the target of negative social interactions, i.e., relationship conflict. In other words, I expect work-personal conflict to transmit the impact of friendship features on negative social interactions or tension in the coworker relationship.

As indicated above, work-nonwork conflict has often been characterized as the process whereby resources needed in one role deplete those needed in another role (Rothbard, 2001; ten Brummelhuis & Bakker, 2012). Studies have found that depletion more broadly impairs moral awareness and enables dishonesty (Gino et al., 2011) and unethical behavior (Welsh & Ordóñez, 2014). Research has also found that segmented and incompatible work and nonwork identities were linked to greater unethical behavior (Ebrahimi, Kouchaki, & Patrick, 2020) and negative activated mood was positively related to unethical behavior to help a teammate (Umphress et al., 2020). Negative activated mood often manifests as anxiety (Remington et al., 2000), which has a positive meta-analytic relationship with WFC (Amstad, Meier, Fasel, Elfering, & Semmer, 2011), suggesting a connection between work-personal conflict and unethical behavior to help the coworker. Bridge and Baxter (1992) found that one of the predominant tensions arising in coworker relationships is objectivity-related strain (part of what they refer to as the dialectic between impartiality and favoritism). This strain refers to the notion that individuals feel pressured to "display preferential behavior toward one's friend" yet also follow "expectations of equal treatment in the workplace" (Bridge & Baxter, 1992, p. 217). This ties to strain between competing demands from work and friend roles (i.e., work-personal conflict, Wilson & Baumann, 2015) and suggests individuals may choose to unethically help a friend at work in order to resolve this strain or tension. Integrating these arguments, I predict that:

- *Hypothesis 16*: Work-personal conflict will mediate the relationships between *nonwork self-disclosure with coworker* and (a) unethical behavior and (b) relationship conflict with coworker.
- *Hypothesis 17*: Work-personal conflict will mediate the relationships between *nonwork socializing with coworker* and (a) unethical behavior and (b) relationship conflict with coworker.

Lastly, I focus on intrusion as the resource draining, relational mechanism in the CFR model. Kreiner et al. (2009) characterize intrusion violations as the "breach" or "puncturing" of an individual's social boundaries (p. 713). Examples of intrusion include "questions that were overly personal or probed too deeply into" one's personal life or "when an individual is unable to prevent unwanted spillover from one domain into another" (Kreiner et al., 2009, p. 713). Derlega and Chaikin (1977) similarly argued that "Persons can... lose their independence when others know their secrets and private thoughts" (p. 109). Overall, intrusions are considered to be dysfunctional work-nonwork boundary dynamics (Allen et al., 2014). Taken together, these arguments suggest that intrusion may be particularly important when considering the indirect effects of nonwork self-disclosure with a coworker on detrimental outcomes.

Recent research indicates that intrusion from colleagues is negatively correlated with relational attachment (i.e., close bond or sense of belongingness) toward them (Ehrhardt & Ragins, 2019), suggesting that intrusion holds negative implications for social relationships. Moreover,

Gibson (2018) proposed that disruptive self-disclosure can act as a negative shock to the trajectory of the relationship, which also ties to relationship conflict. Other research found that boundary violations at work (home) generated negative affect at work (home) (Hunter, Clark, & Carlson, 2019). Additional insights on this process can be gleaned from research on interruptions, which is a form of intrusion (Puranik, Koopman, & Vough, 2020). Interruptions from others during work are positively related to indicators of strain, such as anxiety and emotional exhaustion (Lin, Kain, & Fritz, 2013) and have been proposed to lead to forgetfulness and errors in work tasks (Puranik et al., 2020) as well as other negative outcomes such as stress (Jett & George, 2003). Unethical behavior to help a teammate appears to stem from relational and resource drain processes, such as negative affect (Umphress et al., 2020); intrusion is a negative relational experience that is expected to foster this behavior. As indicated above, one of the relational strains arising in coworker relationships is the tension or pull between impartiality and favoritism (Bridge & Baxter, 1992). This experience is likely to feel intrusive (i.e., when one feels pressured to give preferential treatment to their coworker friend, this is likely to violate one's boundaries and social norms as a coworker) and this negative experience should make it more difficult for employees to refrain from unethical behavior to help their coworker. Altogether, I expect intrusion to transmit the effects of nonwork self-disclosure on negative relational and work outcomes.

Hypothesis 18: Intrusion will mediate the relationships between *nonwork self-disclosure with coworker* and (a) unethical behavior and (c) relationship conflict with coworker.

OVERVIEW OF STUDIES

Overall, I tested my hypotheses (summarized in Appendix A; see also definitions of model constructs in Appendix B) across two studies, a vignette experiment and a two-wave field study, as outlined in Appendix C. I validated new or heavily adapted measures in a Pilot Study prior to conducting the experiment and field study. Below, I elaborate on the methods and results for each study. A full list of measures for model variables, as well as supplemental measures, can be found in Appendix D. The proposed vignettes for Study 1 are shown in Appendix E. All three studies were conducted using Qualtrics online survey software. Each study was determined exempt by Purdue University IRB.

PILOT STUDY

The objective of the Pilot Study was to validate new or heavily adapted measures of nonwork self-disclosure with coworker and nonwork socializing with coworker. Current measures of nonwork self-disclosure were designed for employee-supervisor samples (e.g., Nifadkar et al., 2019), which would be expected to have a different social dynamic, such as power distance and hierarchical differences (Sias et al., 2004; Unsworth, Kragt, & Johnston-Billings, 2018) than peer coworkers and potentially have a more guarded professional boundary. Existing measures of coworker disclosure reference work-related disclosures (e.g., Baer, Matta, Kim, Welsh, & Garud, 2018). In addition, current scales evaluating social activities have largely been designed to measure "broad classes of social activity" (Watson et al., 1992, p. 1014), rather than activities one might participate in with a coworker friend specifically. In their research on work-personal conflict, Wilson and Baumann (2015) suggested that future research develop "personal-specific social activities" (p. 273), indicating the need for a scale assessing activities in the personal or friendship

domain. Moreover, these authors emphasized that who one participates in social activities with such as coworkers—matters when considering work-personal conflict (Wilson & Baumann, 2015). Thus, measures for nonwork self-disclosure, socializing, and social activities with a coworker are needed.

Sample and Procedure

The Pilot Study sample included 150 full-time employed participants from Amazon Mechanical Turk (MTurk). This sample size and population is consistent with prior content validation studies (e.g., Baer, Rodell, et al., 2018). MTurk participants have been found to be of similar quality as those recruited from other online panels, such as Qualtrics Panels and snowball and convenience samples (Landers & Behrend, 2015; Walter, Seibert, Goering, & O'Boyle, 2019). Following recent recommendations for conducting research using MTurk (Keith, Tay, & Harms, 2017), registered MTurk Workers who had at least a 95% approval rating, resided in the United States, and who were employed full-time (i.e., work 30 hours or more per week) were eligible to participate in the Pilot Study. In addition, participants were required to work face-to-face regularly with at least one coworker who was at approximately their same hierarchical level in their organization (i.e., a peer). Regarding demographics, 59.3% of participants were female, 88% were White (5.3% were African American, 4% were Asian, and 2.7% were Latinx), 76.0% had at least a Bachelor's degree, and 63.3% were 35 years old or older (25-34 was the most popular age category and included 34.7% of participants).

To adapt, develop, and validate scales for nonwork self-disclosure, socializing and social activities with the coworker, I followed Hinkin and Tracey's (1999) procedures. This entailed providing participants with definitions of each construct (i.e., nonwork self-disclosure and socializing with their coworker), assessing the degree to which each item was a good match or fit

with the corresponding definition (Baer, Rodell, et al., 2018), then evaluating the mean degree of "definitional correspondence," following recent content validation guidelines from Colquitt, Sabey, Rodell, and Hill (2019, p. 1243). To assess careless responding, I used two attention check questions in which participants completed an item assessing their attention to the survey (i.e., "Please select strongly disagree"), consistent with recent suggestions (Barends & de Vries, 2019; Cheung, Burns, Sinclair, & Sliter, 2017). Participants who failed all attention check items were discarded from the final sample. As additional checks for careless responding, the surveys were monitored for low completion times and straight-line responses (Meade & Craig, 2012). Prior to beginning the content validation task, participants were given a chance to practice with three scale items for constructs not assessed in the study (see Colquitt et al., 2019). The Pilot Study survey lasted approximately 10-15 minutes and participants were compensated with \$0.75. Pilot Study data was collected March 5 through March 7, 2020.

Measures

Study Measures

Before accessing the survey, participants completed an unpaid 30-second prescreen (Keith et al., 2017) to determine eligibility. Pilot Study items are provided in Appendix D. Two nonwork self-disclosure scales and two nonwork socializing/social activities were validated. Following Baer, Rodell, et al. (2018), scale anchors were 1 = "Item is an extremely bad match" and 7 = "Item is an extremely good match" (with the provided definition of the construct).

Scale adaptations are as follows. To assess nonwork self-disclosure with coworker, I adapted Nifadkar et al.'s (2019) 6-item nonwork self-disclosure scale to reference the focal coworker (vs. supervisor), assess self-ratings (vs. other-rated) and refer to personal life (vs.

family). Coefficient alpha for this scale was .98. As an alternative scale for nonwork selfdisclosure, I adapted the 5-item disclosure subscale from Baer, Matta, and et al.'s (2018) trusting behaviors scale to assess personal (vs. work-related) disclosures. Coefficient alpha for this scale was .98.

To capture discrete nonwork social activities with coworker, I adapted Watson and colleagues' (1992) social activities measure for the personal domain (i.e., with a friend), resulting in 13 items. The items from Watson et al.'s (1992) scale that were dropped include romantic activity or dating (which is not applicable to coworker friendships, which are distinct from romantic relationships, see Footnote 1), studying (given that I focus on employed adults, who are no longer in school), running errands [which captures more of a domestic responsibility (Dumas & Perry-Smith, 2018), rather than a social activity in a leisure setting; the focus is on completing the errand rather than spending time with the coworker], and having a serious discussion (which relates more to self-disclosure, which was measured separately and discussed above). However, I still collected these items, but did not include them in the final analyses. Items that were added, based on informal interviews with personal contacts (family and friends) about their experiences with coworkers who are also friends, included "go to a coffee shop," "participate in a hobby," "participate in a volunteering activity," and "go to your coworker's house or apartment." Items that were slightly adapted to a coworker context include "go out for happy hour or a drink" (to include "happy hour"), "go out for a meal," "participate in a cultural activity (e.g., concert, play or museum)" (for the latter, I grouped these activities into a single item due to their similarity), and "go on a trip that is not directly related to work" (item in the original scale does not specify whether the trip is work-related). Coefficient alpha for this scale was .97.

Then, I generated a new, general measure of socializing with a coworker, which consisted of 5 items. This measure was developed as an alternative scale for nonwork activities with coworker and is a more global assessment of nonwork socializing than the specific social activities outlined by Watson et al. (1992). This scale was created based on how coworker friendships are described in the literature (Colbert et al., 2016; Hinds & Cramton, 2014; Ingram & Zou, 2008; Tews et al., 2014), such as "socialize with," "hang out with," "spend time with," and references socializing with one's coworker outside of work time (e.g., after work, nonwork days such as the weekend). Coefficient alpha for this scale was .96.

Supplemental Measures

To test definitional distinctiveness, I included items for "orbiting" constructs for nonwork self-disclosure and socializing with coworker (i.e., related, established), following procedures outlined by Colquitt et al (2019). The "orbiting" constructs I examined include CWX, emotional support, and intrusion, due to their conceptual similarity with nonwork self-disclosure and socializing with coworker, as well as the third friendship feature (personal growth relationship function). I used Sherony and Green's (2002) 6-item CWX scale ($\alpha = .97$), Colbert et al.'s (2016) 3-item scales for task assistance relationship function ($\alpha = .98$), emotional support relationship function ($\alpha = .97$), and personal growth relationship function ($\alpha = .96$), as well as Ehrhardt and Ragins' (2019) 4-item perceived intrusion scale ($\alpha = .93$).

Analyses

I evaluated the definitional correspondence of the items developed and/or validated in the Pilot Study using Colquitt et al.'s (2019) procedures. Definitional correspondence is computed by averaging the assessed level of each item's fit with the provided definition out of the number of scale anchors (7) and would be supported if the measure in question has a mean level of correspondence of at least 5.80 (Colquitt et al., 2019). Participants were provided the corresponding definitions of each construct/scale, which are outlined in Appendix B. Definitional distinctiveness is computed as examining the definitional correspondence for the construct in question relative to the other "orbiting" constructs and would be supported if this difference or index is positive (that is, if the definitional correspondence for the construct in question exceeds that of the "orbiting" constructs) (Colquitt et al., 2019, p. 1249).

Results

Mean definitional correspondence for focal constructs (nonwork self-disclosure and nonwork socializing/social activities) and orbiting constructs are presented below.

Nonwork self-disclosure

Mean definitional correspondence for the nonwork self-disclosure scale adapted from Nifadkar et al. (2019) was 6.03 (items ranged 5.97 to 6.08) and mean definitional correspondence for the nonwork self-disclosure scale adapted from Baer, Matta, et al. (2018) was 5.89 (items ranged 5.17 to 6.27). Each of these scales exceeded the 5.80 (of 7) benchmark suggested by Colquitt et al. (2019). Regarding orbiting constructs, mean definitional correspondence was 3.05 for CWX, 4.42 for emotional support relationship function, 2.75 for task assistance relationship function, 4.00 for personal growth relationship function, 3.31 for perceived intrusion, 4.09 for nonwork social activities with coworker, and 4.34 for nonwork socializing with coworker. In sum, the mean definitional correspondence for nonwork self-disclosure scales adapted by Nifadkar et al. (2019) and Baer, Matta, et al. (2018) exceeded that of each orbiting construct, demonstrating definitional distinctiveness.

Nonwork socializing and social activities

Mean definitional correspondence for the nonwork socializing with coworker scale was 6.05 (items ranged 5.86 to 6.15). Mean definitional correspondence for the nonwork social activities with coworker scale was 6.00 (items ranged 5.75 to 6.25). Each of these scales exceeded the 5.80 benchmark suggested by Colquitt et al. (2019). In terms of orbiting constructs, mean definitional correspondence was 2.85 for CWX, 3.38 for emotional support relationship function, 2.62 for task assistance relationship function, 3.30 for personal growth relationship function, 2.47 for perceived intrusion, 3.72 for the nonwork self-disclosure scale adapted from Nifadkar et al. (2019), and 3.53 for the nonwork self-disclosure scale adapted from Baer, Matta, et al. (2018). In addition, the dropped Watson et al. (1992) items outlined above had an average mean definitional correspondence of 4.89. In sum, the mean definitional correspondence for nonwork socializing and nonwork social activities scales exceeded that of each orbiting construct, indicating definitional distinctiveness.

STUDY 1: VIGNETTE EXPERIMENT

The goal of the vignette experiment study was to examine the hypothesized main effects of the three friendship features (personal growth relationship function, nonwork self-disclosure, and nonwork socializing) on resource gain/drain. That is, an experimental approach would allow me to isolate the independent effects of the three friendship features, establish temporal precedence (Shadish, Cook, & Campbell, 2002), and examine the interaction between the three friendship features and moderators in the CFR model (e.g., paradox mindset). Although early research on friendship often used laboratory approaches, experimental designs in coworker friendship research has been overlooked. Overall, manipulating the three friendship features in separate vignettes represents a general first step of investigating the intersection between work and friendship within a coworker relationship and specifically tests Hypotheses 1-10.

Sample and Procedure

The sample for the vignette experiment included 526 full-time employed participants recruited from MTurk. Employed participants from MTurk would likely be more familiar with maintaining relationships, including friendships, with coworkers. Regarding demographics, 60.3% of participants were female, 80.6 were White (8.9% were African American, 5.5% were Asian, 4% were Latinx, and 1% were Other ethnicity), 65.4% held at least a Bachelor's degree, and 63.9% were 35 years or older (34-44 was the most popular age category and included 35.4% of participants). In addition, 48.1% of participants were married and 48.5% had at least one child living with them (average number of children was .88). Participants' average organizational tenure was 7.84 years, and they reported an average of 7.35 work friends (SD = 10.25). The most common types of jobs in the sample were technology, accounting, sales, teacher, and engineer.

In regard to study procedure, participants were randomly assigned to one of six vignettes: personal growth relationship function manipulation (low, high), nonwork self-disclosure (low, high), and nonwork socializing (low, high). The experiment used a vignette approach which entailed presenting participants with one of six hypothetical yet realistic scenarios (Aguinis & Bradley, 2014) that each manipulated the three friendship features as indicated above. The vignettes are presented in Appendix E. To summarize, scenarios for personal growth relationship function (or simply "personal growth" as referred to below) were grounded in the description from Colbert et al. (2016), such that the high condition depicts how the participant's hypothetical coworker Taylor gives the participant new perspectives and insights about life and helps them grow as a person. The nonwork self-disclosure scenario followed definitions of self-disclosure relating to one's personal life (e.g., Derlega et al., 2008; Nifadkar et al., 2019), such that the participant shares with Taylor feelings and events regarding their personal life. Lastly, the nonwork socializing scenario described how the participant and Taylor go out for lunch and happy hour and participate in hobbies together. The low conditions indicated an absence of each of personal growth relationship function, nonwork self-disclosure, and nonwork socializing, respectively. Similar to Study 1, I used two attention check items to assess careless responding (Barends & de Vries, 2019; Cheung et al., 2017) and discarded from the final sample participants who failed all attention checks. The experiment took approximately 10-15 minutes and participants were compensated with \$0.75. Study 1 data was collected from March 10 through March 13, 2020.

Power analyses using G*power suggest that a total sample size of at least 516 participants (86 participants assigned to each condition) is sufficient to detect a medium effect size with *t*-tests (Cohen's d = .50) and regression analyses with 90% power and two-tailed tests. As noted above, the final sample included 526 participants. Of these, 178 participants were assigned to the personal

growth relationship function manipulation (N in the high condition = 90 and N in the low condition = 88), 171 participants were assigned to the self-disclosure manipulation (N in the high condition = 84 and N in the low condition = 87), and 177 were assigned to the socializing manipulation (Nin the high condition = 88 and N in the low condition = 89). Due random assignment in the survey programming, the number of participants assigned to each condition varied slightly.

Measures

Unless indicated otherwise, all Study 1 measures used a 5-point scale in which 1 = "strongly disagree" and 5 = "strongly agree." Items for study measures and supplemental/control measures are provided in Appendix D.

Study Measures

Manipulation Checks

As manipulation checks, I used Colbert and colleagues' (2016) scale to assess *personal* growth relationship function ($\alpha = .98$), Nifadkar and colleagues' (2019) scale for nonwork selfdisclosure ($\alpha = .99$), and the scale for nonwork socializing with coworker ($\alpha = .97$) developed and validated in the Pilot Study.

Realism Checks

To check the realism of the scenarios, I used the realism check item originally from Chen, Sharma, Edinger, Shapiro, and Farh (2011) using adaptations from Farh, Lanaj, and Ilies (2017): "It is realistic that I might work with a coworker like Taylor" as well as Farh et al.'s (2017, p. 1129) realism check for the scenario as a whole: "At some point during my career, I will probably encounter a situation like the one described above" ($\alpha = .78$).

Dependent Variables

Participants were asked to rate their anticipated or hypothetical work-personal enrichment, vitality, psychological detachment, work-personal conflict, and perceived intrusion.

Work-personal enrichment was captured using 3 items each for WPE and PWE, adapted from Kacmar, Crawford, Carlson, Ferguson, and Whitten's (2014) scale. Example items for WPE and PWE, respectively, include "My involvement in this job would make me feel happy and this would help me be a better person" and "My involvement in my personal life would put me in a good mood and this would help me be a better worker." Coefficient alpha was .87 for WPE and .84 for PWE.

Vitality at work was measured using the 5-item scale adapted from Porath et al. (2012). An example item is "Regarding the job described, I imagine I would feel alive and vital." Coefficient alpha for this scale was .88.

Psychological detachment was assessed using adaptations of Sonnentag and Fritz's (2007) 4-item scale. For example, "When I'm not working in the job described, I would not think about work at all." Coefficient alpha for this scale was .84.

Work-personal conflict was assessed using 5 items each for WPC and PWC, adapted slightly from Wilson and Baumann's (2015) scales. Example items for WPC and PWC, respectively, include "I imagine this job would produce strain that would make it difficult to fulfill personal interests" and "I imagine that my personal activities would drain me of energy I would need to do this job." Coefficient alpha was .93 for WPC and .93 for PWC.

Intrusion was assessed using the 4-item scale from Ehrhardt and Ragins (2019), which includes the example item "I would feel my personal life is invaded by Taylor." Coefficient alpha for this scale was .94.

Moderator Variables

Turning to the moderator variables, participants were asked to refer to their current job and rate the extent of career advancement relationship function, task interdependence, and workrelated information-sharing with their current coworkers. Participants were also asked to report their segmentation preferences and paradox mindset in general.

Career advancement relationship function was captured using the 3-item scale from Colbert et al. (2016). An example item is "My coworkers discuss my career plans with me." Coefficient alpha for this scale was .91.

Work-related information sharing was measured with Bunderson and Sutcliffe's (2002) 3item scale. An example work-related information sharing item is "My coworkers and I freely share information used to make key work decisions." Coefficient alpha for this scale was .84.

Task interdependence was assessed with Pearce and Gregersen's (1991) 4-item scale using adaptations from Sin, Nahrgang, and Morgeson (2009). An example item for task interdependence is "I work closely with my coworkers in doing my work." Coefficient alpha for this scale was .78.

Work-nonwork segmentation preferences was assessed using an adapted version of Kreiner's (2006) 4-item scale. An example segmentation preferences item is "I prefer to keep work life at work." Coefficient alpha for this scale was .90.

Paradox mindset was measured with Miron-Spektor and colleagues' (2018) 9-item scale. An example paradox mindset item is "Tension between ideas energizes me." Coefficient alpha for this scale was .90.

Supplemental Variables

Although participants were randomly assigned to conditions, I also collected demographics and several supplemental variables, including gender, age, ethnicity, employment status, hours worked per week, years employed by their current organization, and number of friends at work. I also collected the 20-item Mini-IPIP measure of Big 5 personality facets (Donnellan, Oswald, Baird, & Lucas, 2006) (α = .83 for extraversion, α = .80 for agreeableness, α = .74 for conscientiousness, α = .72 for neuroticism, and α =.79 for openness) and the PANAS from Watson, Clark, and Tellegen (1988), which included 10 items for each for positive affect (α = .93) and negative affect (α = .95).

Supplemental Outcome Measures

As supplemental outcome measures, I collected intentions to enact helping behaviors and unethical behavior, consistent with prior vignette experiments that have measured intentions of these and similar behaviors (e.g., Reh et al., 2018; Umphress et al., 2020). This allowed me to test in supplemental analyses the direct main effects of personal growth relationship function, nonwork self-disclosure, and nonwork socializing with one's coworker as well as explore mediation (using measurement-of-mediation design, Pirlott & Mackinnon, 2016).

Helping intentions was captured by adapting the 3 proactive helping items used by Lee, Bradburn, Johnson, Lin, and Chang (2019), developed by Lee and Allen (2002). An example item is "Without being asked, I would help coworkers in this job make progress on their work." Coefficient alpha for this scale was .88.

Unethical helping intentions was assessed using Umphress and colleagues' (2020) 3-item measure of unethical behavior to help a teammate, adapted from Umphress et al. (2010). An example item of this scale is "To benefit Taylor, I would withhold negative information about their performance from others." Coefficient alpha for this scale was .87.

Analyses

Manipulation Checks

Prior to testing Hypotheses 1-10, I conducted manipulation checks by comparing low and high conditions for each of the friendship features scenarios using *t*-tests (see Dang, Umphress, & Mitchell, 2017; Whiteside & Barclay, 2018; Taylor, Griffeth, Vadera, Folger, & Letwin, 2019). Specifically, I examined whether participants assigned to the high conditions (of personal growth, nonwork self-disclosure, and nonwork socializing with coworker, respectively) reported higher levels (of personal growth, nonwork self-disclosure, and nonwork self-disclosure, and nonwork self-disclosure, and nonwork self-disclosure, and nonwork socializing, respectively) than participants assigned to the low conditions.

Hypothesis Testing

To analyze Study 1 data, I used SPSS Version 26. To test Hypotheses 1-3, I used ordinary least squares (OLS) regression. These hypotheses would be supported if the main effects of the three friendship features on the resource gain/drain dependent variables are significant. The moderation effects specified in Hypotheses 4-10 were tested using hierarchical OLS regression (e.g., Dang et al., 2017). To aid interpretation, the five moderator variables were mean-centered in order to assist with interpretation of the effects. Significant interactions were plotted at one standard deviation above and below the mean of the moderator variables (Aiken & West, 1991). The manipulations were dummy-coded such that 0 = low condition and 1 = high condition. In the first step (block) of the regression, the resource gain and drain variables were regressed onto the manipulation dummy variable. In the second step (block), the moderator variable was added. In the third step (block), the manipulation X moderator variable interaction was added. Hypotheses

4-10 would receive support if the respective interaction terms are significant and if the form of the interaction is consistent with hypotheses.

Results

Descriptive statistics and correlations between Study 1 variables are presented in Table 1. Unstandardized results of OLS regression corresponding to hypothesis tests for the personal growth relationship function manipulation, nonwork self-disclosure manipulation, and nonwork socializing manipulation are presented in Tables 2, 3, and 4, respectively. Steps 2a, 2b, 2c, 3a, 3b, and 3c for each of the dependent variables shown in Tables 2, 3, and 4 were run as separate regressions but are presented in the same tables for parsimony.

Vari	able	М	SD	1	2	3	4	5	6	7	8	9	10
1.	Personal growth manipulation	.51	.50	.98									
2.	Nonwork self-disclosure manipulation	.49	.50		.99								
3.	Nonwork socializing manipulation	.50	.50			.97							
4.	Career advancement	3.18	1.08	.05	.04	.13	.91						
5.	Work-related information-sharing	4.09	.76	.07	.09	.18*	.34**	.84					
6.	Task interdependence	3.90	.73	.07	.16*	.07	.36**	.57**	.78				
7.	Segmentation preferences	4.21	.76	.03	11	02	09*	.23**	.09*	.90			
8.	Paradox mindset	3.47	.75	04	.06	.08	.26**	.20**	.19**	.07	.90		
9.	Work-personal enrichment	3.72	.85	.52**	.25**	.45**	.33**	.33**	.30**	.04	.23**	.87	
10.	Personal-work enrichment	3.74	.85	.44**	.21**	.37**	.19**	.28**	.27**	.05	.22**	.73**	.84
11.	Vitality at work	3.67	.78	.39**	.22**	.24**	.25**	.28**	.25**	.04	.26**	.65**	.61**
12.	Psychological detachment from work	3.56	.86	03	.05	22**	04	.17**	.05	.34**	.02	.02	.03
13.	Work-personal conflict	2.60	1.04	32**	11	07	.10*	- .21 ^{**}	- .11 [*]	08	.00	25**	21**
14.	Personal-work conflict	2.20	.97	13	08	07	.19**	19**	08	24**	.04	14**	15**
15.	Perceived intrusion	2.05	1.07	.02	.07	07	.13**	24**	- .14 ^{**}	22**	.01	08	05
16.	Helping intentions	3.98	.75	.13	.15	.19**	.11**	.34**	.27**	.12**	.24**	.33**	.26**
17.	Unethical helping intentions	3.19	1.03	.11	.05	.21**	.03	03	04	.04	.07	.23**	.19**

Table 1: Descriptive Statistics and Correlations Between Study 1 Variables

Notes. Conditions for personal growth, self-disclosure, and socializing manipulations were dummy-coded such that 0 = low and 1 = high. Coefficient alpha values are presented along the diagonal in italics. * p < .05. ** p < .01.

Vori	abla	М	SD	11	12	12	14	15	16	17
v arī		11/1	SD	11	12	15	14	13	10	1/
1.	Personal growth manipulation	.51	.50							
2.	Nonwork self-disclosure manipulation	.49	.50							
3.	Nonwork socializing manipulation	.50	.50							
4.	Career advancement	3.18	1.08							
5.	Work-related information-sharing	4.09	.76							
6.	Task interdependence	3.90	.73							
7.	Segmentation preferences	4.21	.76							
8.	Paradox mindset	3.47	.75							
9.	Work-personal enrichment	3.72	.85							
10.	Personal-work enrichment	3.74	.85							
11.	Vitality at work	3.67	.78	.88						
12.	Psychological detachment from work	3.56	.86	01	.84					
13.	Work-personal conflict	2.60	1.04	42**	08	.93				
14.	Personal-work conflict	2.20	.97	30**	07	.71**	.93			
15.	Perceived intrusion	2.05	1.07	20**	05	.52**	.66**	.94		
16.	Helping intentions	3.98	.75	.34**	.09*	24**	23**	15**	.88	
17.	Unethical helping intentions	3.19	1.03	.17**	01	00	.03	.05	.21**	.87

Table 1 Continued

Notes. Conditions for personal growth, self-disclosure, and socializing manipulations were dummy-coded such that 0 = 100 and 1 = 100 high. Coefficient alpha values are presented along the diagonal in italics. * p < .05. ** p < .01.

		Work-personal enrichment (WPE)			Perenric	Personal-work enrichment (PWE)			Vitality at work				gical ient
		b	SE	p	b	SE	p	b	SE	р	b	SE	р
	Step 1												
	Constant	3.22**	.08	<.001	3.35**	.09	<.001	3.20^{**}	.09	<.001	3.55**	.09	<.001
	Personal growth	.94**	.12	< .001	.79**	.12	<.001	.69**	.12	<.001	05	.13	.709
	R^2	.28**		<.001	.20**		<.001	.15**		<.001	.00		.709
	Step 2a												
	Personal growth	.91**	.11	< .001	.76**	.12	<.001	.67**	.12	<.001	05	.13	.696
	Career advancement	.24**	.05	< .001	.25**	.05	<.001	.21**	.06	<.001	.02	.06	.708
	ΔR^2	$.08^{**}$		<.001	.09**		<.001	.07**		.001	.00		.708
	Step 3a												
	Personal growth	.93**	.11	<.001	.76**	.12	<.001	.69**	.12	<.001	06	.13	.645
	Career advancement	.32**	.08	<.001	.28**	.08	.001	.26**	.08	.002	03	.09	.750
	Personal growth X career advancement	15	.10	.142	05	.11	.619	09	.11	.406	.09	.12	.448
	ΔR^2	.01		.142	.00		.619	.00		.406	.00		.448
	Step 2b												
10	Personal growth	.94**	.12	<.001	$.78^{**}$.12	<.001	.69**	.12	<.001	07	.12	.591
C	Segmentation preferences	.04	.07	.616	.14†	.08	.063	04**	.08	.590	.38**	.08	.000
	ΔR^2	.01		.616	.02†		.063	.00		.590	.12**		.000
	Step 3b												
	Personal growth	.94**	.11	< .001	$.78^{**}$.12	<.001	.69**	.12	<.001	07	.12	.590
	Segmentation preferences	17	.11	.133	.08	.12	.536	22†	.12	.072	.34**	.12	.006
	Personal growth X segmentation preferences	.36*	.15	.017	.12	.16	.448	.30†	.16	.058	.07	.16	.683
	ΔR^2	$.02^{*}$.017	.00		.448	.02†		.058	.00		.683
	Step 2c												
	Personal growth	.94**	.12	<.001	.79**	.12	<.001	$.70^{**}$.12	<.001	05	.13	.726
	Paradox mindset	.05	.08	.516	.11	.08	.184	.15†	.08	.069	.05	.09	.547
	ΔR^2	.00		.516	.01		.184	.02†		.069	.00		.547
	Step 3c												
	Personal growth	.94**	.12	< .001	.79**	.12	<.001	.69**	.12	<.001	04	.13	.781
	Paradox mindset	.05	.10	.613	.10	.11	.335	.21†	.11	.052	.00	.12	.987
	Personal growth X paradox mindset	00	.16	.977	.01	.16	.961	15	.16	.377	.12	.18	.509
	ΔR^2	.00		.977	.00		.961	.00		.377	.00		.509

Table 2:	Unstandardized	Results of	f Regression	for Study	1: Personal	Growth
			0	2		

Notes. Conditions for manipulations were dummy-coded such that 0 = low and 1 = high. N = 178. Personal growth = personal growth relationship function. Career advancement = career advancement relationship function. $^{\dagger}p < .10$. $^{*}p < .05$. $^{**}p < .01$.

Table 2 Continued

	Work-personal conflict (WPC)			Per	sonal- flict (P	work WC)	Perceived intrusion			
	<i>b</i>	SE	<i>p</i>	b	SE	<i>p</i>	b	SE	р	
Step 1										
Constant	3.06**	.11	<.001	2.38**	.10	< .001	1.98^{**}	.11	< .001	
Personal growth	69**	.15	<.001	25†	.14	.088	.03	.16	.846	
R^2	$.10^{**}$		<.001	$.02^{\dagger}$.088	.00		.846	
Step 2a										
Personal growth	69**	.15	<.001	25†	.14	.081	.02	.16	.922	
Career advancement	.07	.07	.336	.06	.07	.392	.15*	.07	.048	
ΔR^2	.01		.336	.00		.392	.02*		.048	
Step 3a										
Personal growth	- .71**	.16	<.001	23	.14	.108	.03	.16	.829	
Career advancement	.01	.11	.956	$.17^{\dagger}$.10	.099	.25*	.11	.025	
Personal growth X career advancement	.11	.15	.434	20	.14	.148	18	.15	.215	
ΔR^2	.00		.434	.01		.148	.01		.215	
Step 2b										
Personal growth	68**	.15	<.001	23†	.14	.097	.05	.15	.731	
Segmentation preferences	08	.10	.421	29**	.09	.001	45**	.10	<.001	
ΔR^2	.00		.421	$.06^{**}$.001	.11**		< .001	
Step 3b										
Personal growth	68**	.15	<.001	23†	.14	.098	.05	.15	.732	
Segmentation preferences	04	.15	.817	33*	.14	.018	46**	.15	.003	
Personal growth X segmentation preferences	08	.20	.710	.07	.18	.695	.01	.20	.969	
ΔR^2	.00		.710	.00		.695	.00		.969	
Step 2c										
Personal growth	68**	.15	<.001	24†	.14	.098	.04	.16	.822	
Paradox mindset	.19†	.10	.061	.15	.10	.122	.09	.11	.421	
ΔR^2	$.02^{\dagger}$.061	.01		.122	.00		.421	
Step 3c										
Personal growth	68**	.15	<.001	25†	.14	.086	.04	.16	.824	
Paradox mindset	.20	.14	.149	.21	.13	.103	.09	.14	.545	
Personal growth X paradox mindset	01	.21	.953	14	.19	.474	00	.22	.997	
ΔR^2	.00		.953	.00		.474	.00		.997	

Notes. Conditions for personal growth were dummy-coded such that 0 = low and 1 = high. N = 178. Personal growth = personal growth relationship function. Career advancement = career advancement relationship function. $^{\dagger}p < .10$. $^{*}p < .05$. $^{**}p < .01$.

	Work-personal enrichment (WPE)			Perenric	rsonal- hment	work (PWE)	Vita	lity at	work	Psy de	Psychological detachment		
	b	SE	p	b	SE	p	b	SE	р	b	SE	р	
Step 1													
Constant	3.49**	.09	<.001	3.51**	.09	<.001	3.51**	.08	<.001	3.58^{**}	.09	<.001	
Nonwork self-disclosure	.41**	.12	.001	.36**	.13	.005	.32**	.11	.004	.09	.13	.512	
R^2	.06**		.001	.05**		.005	.05**		.004	.00		.512	
Step 2a													
Nonwork self-disclosure	.35**	.11	.002	.32*	.12	.011	.27**	.10	.008	.07	.13	.613	
Work-related information-sharing	.47**	.08	<.001	.35**	.08	<.001	.41**	.07	<.001	.15†	.09	.095	
ΔR^2	.17**		<.001	$.09^{**}$		<.001	$.17^{**}$		<.001	$.02^{\dagger}$.095	
Step 3a													
Nonwork self-disclosure	.35**	.11	.003	.32*	.12	.011	.26**	.10	.009	.06	.13	.627	
Work-related information-sharing	.39**	.11	<.001	.35**	.11	.004	.33**	.09	<.001	.11	.12	.377	
Nonwork self-disclosure X work-related	.17	.15	.280	.04	.17	.816	.19	.14	.160	.09	.18	.614	
information-sharing													
ΔR^2	.01		.280	.00		.816	.01		.160	.00		.614	
Step 2b													
Nonwork self-disclosure	.41**	.13	.001	.35**	.13	.007	.32**	.11	.004	.13	.13	.266	
Segmentation	01	.09	.876	07	.09	.423	.02	.08	.788	.32**	.09	.001	
ΔR^2	.00		.876	.00		.423	.00		.788	$.07^{**}$.001	
Step 3b													
Nonwork self-disclosure	.41**	.13	.001	.35**	.13	.008	.32**	.11	.004	.14	.13	.265	
Segmentation	01	.14	.947	16	.13	.254	02	.11	.867	.47**	.14	.001	
Nonwork self-disclosure X segmentation	01	.18	.962	.15	.18	.413	.07	.16	.649	28	.18	.131	
ΔR^2	.00		.962	.00		.413	.00		.649	.01		.131	
Step 2c													
Nonwork self-disclosure	.38**	.11	.001	.33**	.12	.007	.29**	.10	.005	.08	.13	.533	
Paradox mindset	.42**	.07	<.001	.37**	.08	<.001	.38**	.06	<.001	.05	.09	.597	
ΔR^2	.15**		<.001	.11**		< .001	.16**		<.001	.00		.597	
Step 3c													
Nonwork self-disclosure	.37**	.11	.001	.33**	.12	.008	.28**	.10	.005	.08	.13	.552	
Paradox mindset	.32**	.11	.005	.29*	.12	.015	.24*	.10	.014	08	.13	.529	
Nonwork self-disclosure X paradox mindset	.19	.15	.210	.13	.16	.418	.24†	.13	.062	.22	.17	.196	
ΔR^2	.01		.210	.00		.418	.02†		.062	.01		.196	

Table 3:	Unstandar	dized Resul	ts of Regres	sion for S	Study 1: N	Nonwork Se	elf-Disclosure

Notes. Conditions for nonwork self-disclosure were dummy-coded such that 0 = low and 1 = high. N = 171. Segmentation = segmentation preferences. $^{\dagger}p < .10$. $^{*}p < .05$. $^{**}p < .01$.

Table 3 Continued

	Wo con	rk-pers flict (W	onal /PC)	Percon	rsonal- Iflict (F	work PWC)	P i	erceive ntrusio	ed m
	b	SE	р	b	SE	р	b	SE	р
Step 1									
Constant	2.76^{**}	.11	<.001	2.33**	.10	<.001	2.09^{**}	.12	<.001
Nonwork self-disclosure	21	.15	.163	16	.15	.288	.14	.17	.396
R^2	.01		.163	.01		.288	.00		.230
Step 2a									
Nonwork self-disclosure	17	.15	.261	13	.15	.371	.17	.17	.305
Work-related information-sharing	35**	.10	.001	19†	.10	.054	22†	.11	.052
ΔR^2	.07**		.001	.02†		.054	$.02^{\dagger}$.052
Step 3a									
Nonwork self-disclosure	15	.15	.296	13	.15	.395	.19	.17	.254
Work-related information-sharing	10	.14	.460	08	.14	.545	.05	.15	.730
Nonwork self-disclosure X work-related information-sharing	54**	.20	.007	24	.20	.231	59**	.22	.009
ΔR^2	.04**		.007	.01		.231	.04**		.009
Step 2b									
Nonwork self-disclosure	23	.15	.140	20	.15	.171	.12	.17	.469
Segmentation preferences	09	.11	.391	29**	.16	.006	13	.12	.269
ΔR^2	.00		.391	.04**		.006	.01		.269
Step 3b									
Nonwork self-disclosure	22	.15	.150	20	.15	.181	.11	.17	.503
Segmentation preferences	00	.17	.997	21	.16	.183	31†	.18	.087
Nonwork self-disclosure X segmentation preferences	16	.22	.458	14	.21	.524	.32	.24	.190
ΔR^2	.00		.458	.00		.524	.01		.190
Step 2c									
Nonwork self-disclosure	21	.15	.179	16	.15	.277	.15	.17	.388
Paradox mindset	08	.10	.424	.05	.10	.611	04	.11	.746
ΔR^2	.00		.424	.00		.611	.00		.746
Step 3c									
Nonwork self-disclosure	20	.15	.190	16	.15	.285	.16	.17	.346
Paradox mindset	.17	.15	.265	.14	.15	.338	.31†	.16	.062
Nonwork self-disclosure X paradox mindset	43*	.20	.030	16	.19	.408	60**	.22	.006
ΔR^2	.03*		.030	.00		.408	.04**		.006

Notes. Conditions for nonwork self-disclosure were dummy-coded such that 0 = low and 1 = high. N = 171. $^{\dagger}p < .10.^{*}p < .05.^{**}p < .01.$

		Work-personal enrichment (WPE)			Perenric	Personal-work enrichment (PWE)			Vitality at work			Psychological detachment		
		b	SE	p	b	SE	p	b	SE	р	b	SE	р	
Step 1														
Constant		3.41**	.08	<.001	3.50^{**}	.08	<.001	3.64**	.07	<.001	3.73**	.09	<.001	
Nonwork s	ocializing	.72**	.11	<.001	$.58^{**}$.11	<.001	.33**	.10	.001	38**	.13	.003	
R^2	-	.20**		<.001	.14**		<.001	.06**		.001	.05**		.003	
Step 2a														
Nonwork s	ocializing	.69**	.11	<.001	.56**	.11	<.001	.30**	.10	.002	38**	.13	.003	
Task interc	lependence	$.28^{**}$.07	<.001	.25**	.08	.001	.22**	.07	.001	03	.09	.758	
ΔR^2		.06**		< .001	.05**		.001	.05**		.001	.00		.758	
Step 3a														
Nonwork s	ocializing	.69**	.11	<.001	.55**	.11	<.001	.30**	.10	.003	37**	.13	.004	
Segmentat	ion preferences	.36**	.11	.001	.28**	.11	.009	.27**	.10	.007	15	.13	.238	
Nonwork s	ocializing X task interdependence	17	.15	.236	07	.15	.640	09	.14	.502	.24	.17	.178	
ΔR^2		.01		.236	.00		.640	.00		.502	.01		.178	
Step 2b														
5 Nonwork s	ocializing	.72**	.11	<.001	.58**	.11	<.001	.33**	.10	.001	37**	.12	.002	
Segmentat	ion preferences	.11	.07	.106	.09	.07	.196	.15*	.06	.017	.43**	.07	<.001	
ΔR^2		.01		.106	.01		.196	.03*		.017	.16**		<.001	
Step 3b														
Nonwork s	ocializing	.73**	.11	<.001	.59**	.11	<.001	.33**	.10	.001	37**	.12	.002	
Segmentat	ion preferences	.04	.10	.726	.04	.10	.732	.11	.09	.230	$.40^{**}$.11	<.001	
Nonwork s	ocializing X segmentation	.14	.14	.311	.10	.14	.471	.07	.13	.562	.05	.15	.723	
preference	S													
ΔR^2		.01		.311	.00		.471	.00		.562	.00		.723	
Step 2c														
Nonwork s	ocializing	.69**	.11	<.001	.55**	.11	<.001	.29**	.10	.003	38**	.13	.003	
Paradox m	indset	.29**	.07	<.001	.26**	.08	.001	.25**	.07	<.001	02	.09	.811	
ΔR^2		.07**		<.001	.06**		.001	.07**		<.001	.00		.811	
Step 3c														
Nonwork s	ocializing	$.68^{**}$.11	<.001	.54**	.11	<.001	.29**	.10	.004	39**	.13	.003	
Paradox m	indset	.27**	.09	.004	.19†	.10	.056	.21*	.09	.019	10	.11	.399	
Nonwork s	ocializing X paradox mindset	.04	.15	.776	.10	.15	.217	.12	.14	.393	.19	.18	.294	
ΔR^2		.00		.776	.01		.217	.00		.393	.01		.294	

Table 4: Unstandardized	Results of Regre	ssion for Study	/ 1: Nonwork	Socializing
Tuelle II elletunidul dized	ites of ites	solon for Stady	1.1.0110011	Sounding

Notes. Conditions for nonwork socializing were dummy-coded such that $0 = 10^{\circ}$ and $1 = 10^{\circ}$. $p < .10^{\circ}$, $p < .05^{\circ}$, $p < .05^{\circ}$. $p < .01^{\circ}$.

Table 4 Continued

	Wo	Per	rsonal-	work WC)	Po	Perceived intrusion			
	b	SE	p	<i>b</i>	SE	<i>p</i>	b	SE	р
Step 1			· · ·			1			'
Constant	2.48^{**}	.11	<.001	2.16**	.10	<.001	2.07^{**}	.11	<.001
Nonwork socializing	13	.15	.391	13	.15	.373	15	.16	.359
R^2	.00		.391	.01		.373	.01		.359
Step 2a									
Nonwork socializing	11	.15	.480	11	.15	.448	12	.16	.459
Task interdependence	25*	.10	.016	21*	.10	.041	31**	.11	.005
ΔR^2	.03*		.016	.02*		.041	.05**		.005
Step 3a									
Nonwork socializing	10	.15	.506	11	.15	.454	10	.16	.513
Task interdependence	32*	.15	.031	22	.14	.131	48**	.16	.002
Nonwork socializing X task interdependence	.14	.21	.508	.02	.20	.907	.32	.22	.139
ΔR^2	.00		.508	.00		.907	.01		.139
Step 2b									
Nonwork socializing	14	.15	.375	14	.14	.326	15	.16	.323
Segmentation preferences	16†	.10	.098	34**	.09	<.001	32**	.10	.001
ΔR^2	.02†		.098	$.08^{**}$		<.001	.06**		.001
Step 3b									
Nonwork socializing	14	.15	.363	14	.14	.325	16	.16	.323
Segmentation preferences	09	.14	.535	33*	.13	.014	31*	.15	.036
Nonwork socializing X segmentation preferences	13	.19	.499	03	.18	.875	02	.20	.936
ΔR^2	.00		.499	.00		.875	.00		.936
Step 2c									
Nonwork socializing	12	.15	.443	13	.15	.394	14	.16	.372
Paradox mindset	09	.11	.399	04	.10	.688	.03	.11	.821
ΔR^2	.00		.399	.00		.688	.00		.821
Step 3c									
Nonwork socializing	12	.15	.456	12	.15	.427	13	.16	.416
Paradox mindset	06	.14	.668	.01	.13	.971	.05	.14	.750
Nonwork socializing X paradox mindset	08	.22	.715	12	.21	.577	18	.23	.430
ΔR^2	.00		.715	.00		.577	.00		.430

Notes. Conditions for nonwork socializing were dummy-coded such that 0 = 1 low and 1 = 1 high. N = 177. p < .10. * p < .05. ** p < .01.

Manipulation Checks and Realism Checks

For the personal growth manipulation, participants assigned to the high condition reported higher personal growth (M = 4.30, SD = .57, N = 90) than those assigned to the low condition (M = 1.84, SD = 1.04, N = 88), t(176) = -19.63, p < .001. In terms of the nonwork self-disclosure with coworker manipulation, participants assigned to the high condition reported higher nonwork self-disclosure (M = 4.23, SD = .64, N = 84) than those assigned to the low condition (M = 1.67, SD = 1.00, N = 87), t(169) = -19.91, p < .001. Regarding nonwork socializing with the coworker manipulation, participants assigned to the high condition reported higher socializing (M = 4.53, SD = .59, N = 88) than those assigned to the low condition (M = 1.96, SD = .89, N = 89), t(175) = -22.63, p < .001. In addition, participants assigned to high socializing condition reported higher social activities (M = 3.96, SD = .70) than those assigned to the low condition (M = 1.75, SD = .91), t(175) = -18.00, p < .001.

Results of a one-way between-subjects ANOVA indicated that the six conditions (high and low for personal growth, nonwork self-disclosure and nonwork socializing with the coworker) did not significantly differ on realism, F(5, 520) = .35, p = .881. Moreover, post hoc comparisons using the Tukey HSD test revealed that each of the six conditions did not significantly differ from each other on realism. Realism means across the vignettes ranged from 4.10 to 4.21.

Hypothesis Tests

Hypothesis 1 predicted that personal growth relationship function will be positively related to (a) work-personal enrichment, (b) vitality at work, and (c) psychological detachment, (d) work-personal conflict, and (e) intrusion. As Table 2 shows, in support of Hypotheses 1a and 1b, respectively, personal growth was positively related to work-personal enrichment [both directions: WPE (b = .94, p < .001) and PWE (b = .79, p < .001)] and vitality at work (b = .69, p < .001).
Personal growth was not significantly related to psychological detachment (b = -.05, p = .709) or intrusion (b = .03, p = .846); thus, Hypotheses 1c and 1e were not supported. With regard to Hypothesis 1d, personal growth was significantly related to WPC (b = -.69, p < .001) and had a marginally significant relationship with PWC (b = -.25, p = .088), albeit both of these effects were in the opposite direction than predicted; thus, Hypothesis 1d was not supported.

Hypothesis 2 predicted that nonwork self-disclosure with one's coworker will be positively related to (a) work-personal enrichment, (b) vitality at work, and (c) psychological detachment, (d) work-personal conflict, and (e) intrusion. As Table 3 shows, in support of Hypotheses 2a and 2b, respectively, nonwork self-disclosure was positively related to work-personal enrichment [both directions: WPE (b = .41, p = .001) and PWE (b = .36, p = .005)] and vitality at work (b = .32, p = .004). Nonwork self-disclosure was not significantly related to psychological detachment (b = .09, p = .512), work-personal conflict [in either direction: WPC (b = -.21, p = .163) and PWC (b = -.16, p = .288)], or perceived intrusion (b = .14, p = .396); thus, Hypotheses 2c, 2d, and 2e were not supported.

.13, p = .391) and PWC (b = -.13, p = .373)] or perceived intrusion (b = -.15, p = .359); thus, Hypotheses 3d and 3e were not supported.

Hypothesis 4 predicted that the career advancement relationship function will moderate the positive effect of personal growth relationship function on (a) work-personal enrichment, (b) vitality, (c) work-personal conflict, and (d) intrusion, such that these effects will be stronger when the career advancement function is higher rather than lower. In addition, the career advancement function will moderate the positive effect of personal growth on (e) psychological detachment, such that this effect will be weaker when the career advancement function is higher rather than lower. Hypotheses 4a, 4b, 4c, 4d, and 4e were not supported, as the interaction between personal growth and career advancement was not significant in predicting (a) work-personal enrichment [in either direction: WPE (b = .15, p = .142) and PWE (b = .05, p = .619)], (b) vitality (b = -.09, p = .406), (c) work-personal conflict [in either direction: WPC (b = .11, p = .434) and PWC (b = .20, p = .148), (d) intrusion (b = -.18, p = .215), or (e) psychological detachment (b = .09, p = .448), as seen in Table 2.

Hypothesis 5 predicted that work-related information sharing will moderate the positive effects of nonwork self-disclosure with coworker on (a) work-personal enrichment, (b) vitality, (c) work-personal conflict, and (d) intrusion, such that these effects will be stronger when work-related information sharing is higher rather than lower. Additionally, work-related information sharing will moderate the positive effect of nonwork self-disclosure with coworker on (e) psychological detachment, such that this relationship will be weaker when work-related information sharing is higher rather than lower. Hypotheses 5a, 5b, and 5e were not supported, as the interaction between nonwork self-disclosure and work-related information was not significant in predicting (a) work-personal enrichment [in either direction: WPE (b = .17, p = .280) and PWE

(b = .04, p = .816)], (b) vitality (b = .19, p = .160), or (e) psychological detachment (b = .09, p = .614) (see Table 3). Regarding Hypothesis 5c, the interaction between nonwork self-disclosure and work-related information sharing was significant in predicting WPC (b = -.54, p = .007), as seen in Table 3. In Figure 5, I plotted this interaction at one *SD* above and below the mean of work-related information sharing. As Figure 5 shows, when work-related information sharing was higher (+ 1*SD*), the relationship between nonwork self-disclosure and WPC was negative and significant (b = -.56, p = .008). When work-related information sharing was lower (-1 *SD*), the relationship between nonwork self-disclosure and WPC was not significant (b = .25, p = .244). The form of the interaction was not consistent with predictions. The interaction between nonwork self-disclosure and work-related information sharing was not significant in predicting PWC (b = -.24, p = .231). Thus, Hypothesis 5c was not supported.



Figure 5: Study 1 Interaction of Self-Disclosure and Work-Related Information Sharing Predicting WPC

In terms of Hypothesis 5d, as shown in Table 3, the interaction between nonwork selfdisclosure and work-related information sharing was significant in predicting intrusion (b = -.59, p = .009). As Figure 6 shows, when work-related information sharing was higher (+1 *SD*), the relationship between nonwork self-disclosure and intrusion was not significant (b = -.26, p = .260). When work-related information sharing was lower (-1 *SD*), the relationship between nonwork selfdisclosure and intrusion was positive and significant (b = .64, p = .008). Although this interaction was significant, the form of the interaction was not consistent with predictions. Thus, Hypothesis 5d was not supported.



Figure 6: Study 1 Interaction of Self-Disclosure and Work-Related Information Sharing Predicting Intrusion

Hypothesis 6 predicted that task interdependence will moderate the positive effect of nonwork socializing with coworker on (a) work-personal enrichment, (b) vitality, (c) workpersonal conflict, and (d) intrusion, such that these effects will be stronger when task interdependence is higher rather than lower. Task interdependence will moderate the positive effect of nonwork socializing with coworker on (e) psychological detachment, such that this effect will be weaker when task interdependence is higher rather than lower. Hypotheses 6a, 6b, 6c, 6d, and 6e were not supported, as the interaction between nonwork socializing and task interdependence was not significant in predicting (a) work-personal enrichment [in either direction: WPE (b = -.17, p = .236) and PWE (b = -.07, p = .640)], (b) vitality (b = -.09, p = .502), (c) work-personal conflict [in either direction: WPC (b = .14, p = .508) and PWC (b = .02, p = .507)], (d) intrusion (b = .32, p = .139), or (e) psychological detachment (b = .24, p = .178) (see Table 4).

Hypothesis 7 predicted that work-nonwork segmentation preferences will moderate the effect of nonwork self-disclosure with coworker on work-personal enrichment, work-personal conflict, and psychological detachment such that (a) the positive relationship between nonwork self-disclosure with coworker and work-personal enrichment will be stronger, (b) the positive relationship between nonwork self-disclosure with coworker and detachment will be stronger, and (c) the positive relationship between nonwork self-disclosure with coworker and detachment will be stronger, and (c) the positive relationship between nonwork self-disclosure with coworker and work-personal conflict will be weaker, when a preference for work-nonwork integration is higher rather than lower. Hypotheses 7a, 7b, and 7c were not supported, as the interaction between nonwork self-disclosure and segmentation preferences was not significant in predicting (a) work-personal enrichment [in either direction: WPE (b = -.01, p = .962) and PWE (b = .15, p = .413)], (b) psychological detachment (b = -.28, p = .131), nor (c) work-personal conflict [in either direction: WPC (b = -.16, p = .458) and PWC (b = -.14, p = .524)] (see Table 3).

Hypothesis 8 predicted that work-nonwork segmentation preferences will moderate the relationships between nonwork socializing with coworker and enrichment and conflict as well as with detachment such that, (a) the positive relationship between nonwork socializing with

coworker and work-personal enrichment will be stronger, (b) the positive relationship between nonwork socializing with coworker and detachment will be stronger, and (c) the positive relationship between nonwork socializing with coworker and work-personal conflict will be weaker, when a preference for work-nonwork integration is higher rather than lower. Hypotheses 8a, 8b, and 8c were not supported, as the interaction between nonwork socializing and segmentation preferences was not significant in predicting (a) work-personal enrichment [in either direction: WPE (b = .14, p = .311) and PWE (b = .10, p = .471)], (b) psychological detachment (b= .05, p = .723), nor (c) work-personal conflict [in either direction: WPC (b = -.13, p = .499) and PWC (b = -.03, p = .875)] (see Table 4).

Hypothesis 9 predicted that paradox mindset will moderate the effects of nonwork selfdisclosure with coworker, such that (a) the positive relationship between nonwork self-disclosure and vitality at work will be stronger and (b) the positive relationship between nonwork selfdisclosure and intrusion will be weaker, when paradox mindset is higher rather than lower. With regard to Hypothesis 9a, as shown in Table 3, the interaction between nonwork self-disclosure and paradox mindset was marginally significant in predicting vitality (b = .24, p = .062). As Figure 7 shows, when paradox mindset was higher (+ 1 *SD*), the relationship between nonwork selfdisclosure and vitality was positive and significant (b = .47, p = .001). When paradox mindset was lower (-1 *SD*), the relationship between nonwork self-disclosure and vitality was not significant (b = .10, p = .471). The form of the interaction was consistent with what I predicted in Hypothesis 9a; therefore, this hypothesis was supported.



Figure 7: Study 1 Interaction of Self-Disclosure and Paradox Mindset Predicting Vitality

In terms of Hypothesis 9b, the interaction between nonwork self-disclosure and paradox mindset was significant in predicting intrusion (b = -.60, p = .006). As Figure 8 shows, when paradox mindset was higher (+1 *SD*), the relationship between nonwork self-disclosure and intrusion was not significant (b = -.29, p = .200). When paradox mindset was lower (-1 *SD*), the relationship between nonwork self-disclosure and intrusion was positive and significant (b = .61, p = .010). The form of the interaction was consistent with what I predicted (paradox mindset would weaken the positive relationship between nonwork self-disclosure on intrusion); thus, Hypothesis 9b was supported.



Figure 8: Study 1 Interaction of Self-Disclosure and Paradox Mindset Predicting Intrusion

Hypothesis 10 predicted that paradox mindset will moderate the effects of nonwork socializing with coworker, such that (a) the positive relationship between nonwork socializing and vitality at work will be stronger and (b) the negative relationship between nonwork socializing and intrusion will be weaker, when paradox mindset is higher rather than lower. Hypotheses 10a and 10b were not supported, as the interaction between nonwork socializing and paradox mindset was not significant in predicting (a) vitality (b = .12, p = .393) or (b) intrusion (b = -.18, p = .430) (see Table 4).

Supplemental Analyses

Supplemental Interactions

I conducted a series of supplemental analyses to examine additional interactions, including the moderating effects of segmentation preferences (for effects of personal growth relationship function) and paradox mindset (for effects on work-personal enrichment, work-personal conflict, and psychological detachment). Significant interactions are reported below.

First, as Table 2 indicates, the interaction between personal growth and segmentation preferences was significant in predicting WPE (b = .36, p = .017). In Figure 9, I plotted the relationship between personal growth and WPE at higher (+1 *SD*) and lower (-1 *SD*) segmentation preferences. As Figure 9 shows, the positive relationship between personal growth and WPE was stronger when segmentation preference was higher (+1 *SD*) (b = 1.21, p < .001) than when segmentation preference was lower (-1 *SD*) (b = .67, p < .001).



Figure 9: Study 1 Interaction of Personal Growth and Segmentation Preferences Predicting WPE

Relatedly, as seen in Table 2, the interaction between personal growth and segmentation preferences was marginally significant in predicting vitality (b = .30, p = .058). In Figure 10, I plotted the relationship between personal growth and vitality at higher (+1 *SD*) and lower (-1 *SD*) segmentation preferences. As Figure 10 shows, the positive relationship between personal growth and vitality was stronger when segmentation preferences were higher (+1 *SD*) (b = .92, p < .001) than when segmentation preferences were lower (-1 *SD*) (b = .46, p = .008). Taken together with Figure 9, these results suggest that personal growth resulting from one's relationship with a coworker is more enriching (in terms of greater WPE) and more energizing (in terms of greater vitality at work) when one prefers to segment (vs. integrate) work and nonwork roles.



Figure 10: Study 1 Interaction of Personal Growth and Segmentation Preferences Predicting Vitality

Second, the interaction between nonwork self-disclosure and paradox mindset was significant in predicting WPC (b = -.43, p = .030) (see Table 3). In Figure 11, I plotted the relationship between nonwork self-disclosure and WPC at higher (+1 *SD*) and lower (-1 *SD*) paradox mindset. As Figure 11 shows, the relationship between nonwork self-disclosure and WPC was negative and significant when paradox mindset was higher (+1 *SD*) (b = -.52, p = .013), and not significant when paradox mindset was lower (-1 *SD*) (b = .12, p = .566). Taken together with the results of Hypotheses 9a and 9b, this suggests that paradox mindset amplifies the beneficial effects of nonwork self-disclosure on vitality and WPC (i.e., reduced WPC) and buffers against the detrimental effects of nonwork self-disclosure on intrusion. That is, people with greater paradox mindset may be able to reconcile and benefit from the tensions of blending work and nonwork roles that occurs when disclosing personal matters to a coworker.



Figure 11: Study 1 Interaction of Self-Disclosure and Paradox Mindset Predicting WPC

Next, I examined the moderating effect of task interdependence and work-related information sharing on personal growth. The interaction between personal growth and task interdependence was significant in predicting WPE (b = .38, p = .015), PWE (b = .69, p < .001), WPC (b = -.45, p = .035), and PWC (b = -.63, p = .002). The interaction between personal growth and work-related information sharing was significant in predicting WPE (b = .32, p = .042) and PWE (b = .48, p = .003). Of these, the most interesting was the interaction between personal growth and task interdependence in predicting WPC and PWC, given these main effects were in the opposite direction than expected (negative instead of positive). I plotted these respective interactions in Figures 12 and 13.



Figure 12: Study 1 Interaction of Personal Growth and Task Interdependence Predicting WPC



Figure 13: Study 1 Interaction of Personal Growth and Task Interdependence Predicting PWC

As Figure 12 indicates, when task interdependence was higher (+1 *SD*), the relationship between personal growth and WPC was negative and significant (b = -1.00, p < .001). When task interdependence was lower, the relationship between personal growth and WPC was not significant (b = -.33, p = .125). As Figure 13 shows, when task interdependence was higher (+1 *SD*), the relationship between personal growth and PWC was negative and significant (b = -.69, p= .001). When task interdependence was lower, the relationship between personal growth and WPC was not significant (b = .23, p = .271). Together, these sets of results indicate that task interdependence with one's coworkers amplifies the beneficial effects of personal growth generated from one's relationship with a coworker, in terms of reduced WPC and PWC.

Supplemental Indirect Effects

In supplemental analyses, I used Shrout and Bolger's (2002) procedures for testing mediation in experiments to examine the downstream outcomes of personal growth relationship function as well as nonwork self-disclosure and socializing with coworker on intentions to enact helping and unethical helping. Such procedures, which use a "measurement-of-mediation" design, entail conducting bootstrap tests of the indirect effects. I used the Monte Carlo method for assessing mediation using 20,000 resamples (Selig & Preacher, 2008). An indirect effect is supported if zero is not included in the 95% confidence intervals. As reported above in the focal results, the main effects of the three friendship features on WPE, PWE, and vitality were significant (i.e., effects corresponding to Hypotheses 1a, 1b, 2a, 2b, 3a, and 3b); thus, I focus on the indirect effects that include these α paths. The indirect effects of the three friendship features on helping and unethical helping intentions via WPE, PWE, and vitality at work are presented in Table 5. These results revealed that WPE, PWE, and vitality mediated the positive effects of personal growth, nonwork self-disclosure, and nonwork socializing on helping intentions, which offers preliminary support for Hypotheses 11a, 12a, 13a, and 14a. Interestingly, personal growth had a positive indirect effect on unethical helping intentions through WPE, PWE, and vitality, suggesting that personal growth relationship function may ultimately facilitate both functional helping and dysfunctional (i.e., unethical) helping toward the coworker who helped one grow.

	DV: Helping	intentions	DV: Unethica	al helping
	Indirect Effect	95% CI	Indirect Effect	95% CI
Indirect Effects of Personal Growth				
Personal growth \rightarrow WPE \rightarrow DV	.306*	.155, .481	.448*	.249, .679
Personal growth \rightarrow PWE \rightarrow DV	.199*	.077, .343	.225*	.071, .403
Personal growth \rightarrow Vitality \rightarrow DV	$.198^{*}$.086, .332	.230*	.092, .394
Indirect Effects of Nonwork Self-disclosure				
Nonwork self-disclosure \rightarrow WPE \rightarrow DV	$.087^{*}$.024, .168	.053	022, .151
Nonwork self-disclosure \rightarrow PWE \rightarrow DV	.053*	.005, .121	.048	016, .135
Nonwork self-disclosure \rightarrow Vitality \rightarrow DV	$.077^{*}$.018, .156	.026	041, .108
Indirect Effects of Nonwork Socializing				
Nonwork socializing \rightarrow WPE \rightarrow DV	.256*	.143, .389	.137	007, .301
Nonwork socializing \rightarrow PWE \rightarrow DV	.138*	.010, .289	.110	008, .245
Nonwork socializing \rightarrow Vitality \rightarrow DV	.145*	.053, .253	.023	053, .109

 Table 5: Supplemental Indirect Effects for Study 1

Notes. Conditions for personal growth, self-disclosure, and socializing manipulations were dummy-coded such that 0 = low and 1 = high. DV = Dependent variable. CI = Confidence interval. Personal growth = personal growth relationship function of coworker. Nonwork self-disclosure = nonwork self-disclosure with coworker. Nonwork socializing = nonwork socializing with coworker. For personal growth, N = 178. For nonwork self-disclosure, N = 171. For nonwork socializing, N = 177.

*Indicates 95% CI did not contain 0.

STUDY 2: FIELD STUDY

In Appendix F, I summarize changes to social interactions during Covid-19 due to social distancing and remote work, as well as the adaptations to Study 2 and their justification (e.g., pivoting away from experience sampling methodology, including additional measures). Overall, in Study 2, I build from Study 1 to examine effects of friendship features in a two-wave field study that includes two employee surveys and a coworker survey.

Sample and Procedure

I recruited participants for this study from alumni of the Krannert School of Management at Purdue University, as well as staff (non-academic employees) of Purdue University and other public universities in the Midwest and Big Ten (Indiana University, Indiana University-Purdue University Indianapolis, Michigan State University, Ohio State University, University of Illinois at Urbana-Champaign, University of Iowa, University of Michigan, and University of Minnesota). Krannert alumni were invited to participate via an email sent on my behalf by the alumni relations manager. University staff participants were invited by me directly via email (I collected their publicly available email addresses using a manual scrape). Data was collected from July 21 through September 21, 2020.

Prior to beginning the survey, participants were asked to complete a prescreen to verify eligibility (required to work at least 30 hours per week and have a coworker who they would be willing to recruit into the study and reference throughout the study, i.e., a focal coworker). To minimize common method bias, data collection of study variables was separated (Podsakoff, Lee, MacKenzie, & Podsakoff, 2003), such that demographics, independent variables, and moderators were measured in the Time 1 (T1) survey, and the mediators and dependent variables were

measured approximately two weeks later in the Time 2 (T2) survey. Focal participants were asked to recruit a coworker to participate in the study to rate focal participants' work behaviors (helping, unethical behavior to help the coworker, and adaptive performance).⁹ For the T2 and coworker surveys, participants received up to four reminders. In the measures for the independent variables, participants were instructed to refer to the coworker they recruited into the study. All surveys were approximately 15 minutes. Participants were compensated with \$4 for each survey they completed and a \$4 bonus for completing both T1 and T2 surveys. All payments were in the form of Amazon Gift Cards sent by me to participants directly.

My final sample included 218 employees and their coworkers. Power analyses computed with G*power indicate that a sample size of 200 is adequate to detect a medium effect size with 95% power and a two-tailed test. Of employees, 476 completed the T1 survey and 417 completed the T2 survey (88% response rate). Of coworkers, 259 completed the T1 survey (53% of invited coworkers participated in the study) and 227 completed the T2 survey (88% response rate). I retained for analysis participants who did not have missing data on the model variables. Email addresses and anonymous identifiers to link the surveys were inspected to ensure that the employee and coworker were not the same person. An inspection of this information revealed three instances in which the employee and coworker were suspected to be the same person; the T1 and T2 coworker surveys tied to these individuals were discarded prior to merging and analyzing the data. Additionally, there were eleven instances in which focal participants participated in the study to some degree as both the focal employee and the coworker (i.e., they received the study invitation and recruited their coworker, and their coworker did the same). Of these, there were four instances

⁹ Although I focus on the focal employee in the main results, the dataset is fully dyadic (i.e., both the employee and coworker completed identical sets of surveys and referred to each other in these surveys). Supplemental results of dyadic analyses are presented following the main results.

where both individuals completed both T1 and T2 as both the employee and coworker; thus, I randomly selected which individual would be the focal employee, and which would be the coworker in the data (and discarded their data on the other surveys prior to merging and analysis the data). During T1 data collection, after noticing these instances, I contacted participants and asked them to coordinate and choose who would be the focal employee and who would be the coworker going forward. There were seven instances in which focal participants participated as employee and coworker for some sets of the surveys (e.g., participant A completed T1 and T2 as the employee and T1 as the coworker, and the coworker they recruited, participant B, who had also recruited participant A, completed T1 and T2 as both the employee and coworker). In these instances, I examined the pattern of who completed what and maximized usable data and discarded duplicate participation (e.g., designated A as the focal employee and T2 employee surveys for B).

Of participants in the final sample, 85.8% were university staff and 14.2% were Krannert alumni. Participants were 44.17 years old on average (SD = 11.56), 78.4% were female, 65.6% were married, 41.3% had at least one child living with them (average number of children = .77, SD = 1.05), and 75.7% held at least a Bachelor's degree. Of participants, 90.4% were White (4.1% Asian, 2.3% Latinx, 1.8% African American, and .9% Other races). The most common types of jobs in the sample included administrative assistant, academic advising, marketing and communications, and finance and accounting. Average organizational tenure of participants was 9.25 years (SD = 8.30) and average tenure of relationship with the coworker who they referred to and recruited into the study was 4.74 years (SD = 4.70). Of participants who indicated this coworker was their friend (i.e., responded 4 = "agree" or 5 = "strongly agree" to item "This coworker is my friend," N = 189), their average friendship tenure was 4.84 years (SD = 4.83) and

97.4% indicated they became friends from working together (vs. being friends first then starting to work together). Participants reported an average of 9.76 friends at work (SD = 16.86) and 89% reported that their work group/team has held at least one social event recently, either before or during Covid-19. The most common channels of communication with the coworker at the time of the study included email (92.7%), text messaging (78.0%), video call (e.g., Zoom) (65.1%), phone/voice call (62.8%), instant messaging (50.9%), social media (31.7%), and in-person/face-to-face (30.7%). In terms of communication frequency, 97.2% of participants communicated with their coworker at least once per week (and 47.3% did so at least once per day). Participants reported completing 82.7% of their work from home on average (SD = 33.0%; prior to Covid-19, this was 9.8%).

Measures

Measures for Study 2 are outlined below. In addition, all items for study measures and supplemental measures are presented in Appendix D. Unless indicated otherwise, all scales used anchors 1 = "Strongly disagree," 3 = "Neither agree nor disagree," and 5 = "Strongly agree," and were self-rated.

Time 1 Survey: Study Measures

Personal growth relationship function was captured using the same 3-item scale from Colbert et al. (2016) used in Study 1. Coefficient alpha for this scale was .85.

Nonwork self-disclosure with coworker was measured with the adapted 6-item scale from Nifadkar et al. (2019) that was validated in the Pilot Study and used in Study 1. Coefficient alpha for this scale was .94.

Nonwork socializing with coworker was assessed using the 5-item nonwork socializing

with coworker scale validated in the Pilot Study and used in Study 1. Participants were instructed that the socializing could face-to-face and/or virtual. Coefficient alpha was .92.

Career advancement relationship function was measured with the same 3-item scale from Colbert et al. (2016) as in Study 1. Coefficient alpha for this scale was .87.

Work-related information sharing was measured using the same 3-item scale from Bunderson and Sutcliffe (2002) as in Study 1. Coefficient alpha for this scale was .85.

Task interdependence was measured using the same 4-item scale from Pearce and Gregersen (1991), with Sin et al.'s (2009) adaptations, as in Study 1. Coefficient alpha was .86.

Work-nonwork segmentation preferences was measured with the same 4-item scale from Kreiner (2006) used in Study 1. Coefficient alpha for this scale was .87.

Paradox mindset was assessed with the same 9-item scale from Miron-Spektor and colleagues (2018) used in Study 1. Coefficient alpha for this scale was .78.

Time 2 Survey: Study Measures

Work-personal enrichment was captured using 3 items each for WPE and PWE, adapted from Kacmar et al. (2014), as in Study 1. Coefficient alpha was .83 for WPE and .73 for PWE.

Vitality at work was measured with the same 5-item scale from Porath et al. (2012) as in Study 1. Items were adapted to refer to "while working" instead of "at work" given modifications due to Covid-19 as noted in Appendix F. Coefficient alpha for this scale was .88.

Psychological detachment was measured with the same 4-items scale from Sonnentag and Fritz (2007) as in Study 1. Coefficient alpha for this scale was .87.

Work-personal conflict was captured using Wilson and Baumann's (2015) scale, which includes 5 items each for WPC and PWC, as in Study 1. Coefficient alpha was .93 for WPC and .85 for PWC.

Perceived intrusion was assessed with the 4-item scale from Ehrhardt and Ragins (2019) used in Study 1. Coefficient alpha for this scale was .96.

Life satisfaction was measured using Diener et al.'s (1985) 5-item scale. Coefficient alpha for this scale was .87.

Relationship conflict was captured using Jehn's (1995) 3-item scale. Scale anchors were 1 = "None," 3 = "A moderate amount," and 5 = "A lot." Coefficient alpha for this scale was .88.

Coworker Survey

In regard to hypothesized downstream outcomes, work behaviors were coworker-rated.

Helping behaviors were measured with the subset of 4 items used by Gabriel et al. (2018) developed by Glomb, Bhave, Miner, and Wall (2011). Coefficient alpha for this scale was .87.

Adaptive performance was captured using Griffin and colleagues' (2007) 3-item individual task adaptivity scale. Coefficient alpha for this scale was .89.

Unethical behavior to help the coworker was assessed using the 3-item scale from Study 1, developed by Umphress and colleagues (2020). Coefficient alpha for this scale was .97.

Supplemental and Control Variables

As supplemental data, I collected several additional variables in the Time 1 survey, including Big 5 personality (with the Mini-IPIP scale from Donnellan et al., 2006 as in Study 1, α = .76 for agreeableness, α = .87 for extraversion, α = .80 for conscientiousness, α = .82 for openness, and α = .75 for neuroticism), demographics (age, gender, ethnicity, educational level, marital status, and number of children living with the participant), job attributes (job title and description, organizational tenure), coworker relationship attributes (relationship tenure/length in years), as well as demographics of the participant's focal coworker (to assess demographic similarity). Demographic similarity was coded such that 0 = dissimilar race or gender and 1 = similar race or gender. I collected the number of friends that participants have at work, in order to account for count-based or social network approaches for assessing coworker friendships. This item was "How many friends do you have in your current work organization? These individuals include anyone with whom you socialize outside of work, discuss personal topics, as well as work with or rely on for information or advice in your organization." As an alternative nonwork self-disclosure scale, I collected the adapted 5-item scale from Baer, Matta, et al. (2018) validated in the Pilot Study and used in Study 1. Coefficient alpha for this scale was .89.

Additionally, in Time 1, I collected a set of variables to account for participants' Covid-19 experiences (see also Appendix F). This included a 4-item scale measuring stress (Motowidlo, Packard, & Manning, 1986, $\alpha = .88$ in both T1 and T2), 3 items assessing job insecurity (Mauno, Leskinen, & Kinnunen, 2001, $\alpha = .88$ in T1 and .87 in T2), a 5-item scale measuring talking about Covid-19 (adapted from talking about supervisor unfairness scale from Baer, Rodell et al., 2018, which is another type of negative event outside of one's control, $\alpha = .93$ in T1 and $\alpha = .95$ in T2), and ambivalence about the work situation (adapted from the 3-item scale from Zipay, Mitchell, Baer, Sessions, & Bies, in press, $\alpha = .85$ in T1 and $\alpha = .90$ in T2). In addition, positive affect ($\alpha = .91$ in T1 and $\alpha = .92$ in T2) and negative affect ($\alpha = .89$ in T1 and $\alpha = .90$ in T2) were assessed using Watson et al.'s (1988) scale, as in Study 1.

In Time 1, I examined Colbert and colleagues' (2016) other relationship functions scales [emotional support ($\alpha = .84$), giving to others ($\alpha = .88$), task assistance ($\alpha = .69$), and friendship ($\alpha = .80$)¹⁰, which contained three items each]. In addition, I collected Ehrhardt and Ragins's

¹⁰ Colbert et al.'s (2016) friendship relationship function scale is a general measure of friendship. An example item is "This person is my friend." In the CFR model, I develop and examine distinct friendship features that are more specific than this general measure.

(2019) measures for instrumental support ($\alpha = .86$) and personal support ($\alpha = .93$) supplied by the coworker, which includes 4 items each. For additional data on the employee-coworker relationship context, I collected quality of the working relationship with the coworker using Sherony and Green's (2002) 6-item CWX scale ($\alpha = .86$) as well as perceived proximity using 5 items from Boyer O'Leary, Wilson, and Metiu (2014) ($\alpha = .89$).

Turning to supplemental measures assessed in Time 2, I collected the 5-item relational energy scale from Owen and colleagues (2016) ($\alpha = .88$). Although I focus on the affective dimension of thriving at work (vitality) given its connection to my theoretical foundation, as supplemental data, I collected the cognitive dimension of thriving at work (learning) using Porath and colleagues' (2012) 5-item scale ($\alpha = .89$), as well as vitality in one's personal life ($\alpha = .89$). Because my model includes the recovery experience of psychological detachment, I also examined state of recovery using Sonnentag's 3-item (2003) scale ($\alpha = .88$). Dual-role tension, which specifically addresses conflicting demands between coworking and friendship, was measured with Bridge and Baxter's (1992) 6-item scale ($\alpha = .87$). I collected work engagement (vigor dimension) using Schaufeli, Bakker, and Salanova's (2006) 6-item scale ($\alpha = .79$), given that vigor connects to energy at work (Shirom, 2007). While I focus on individual task adaptivity in the CFR model, I measured team member adaptivity (coworker-rated) using the 3-item scale from Griffin et al. (2007) (α = .90). Emotional exhaustion was assessed with Wharton's (1993) scale, with the subset of 3 items used by Bennett, Gabriel, Calderwood, Dahling, and Trougakos (2016) and Gabriel, Koopman, Rosen, and Johnson (2018) ($\alpha = .91$). Lastly, I measured task conflict with Jehn's (1995) 3-item scale ($\alpha = .83$).

Analyses

Prior to hypothesis testing, I conducted a confirmatory factor analysis (CFA) in Mplus Version 8.3 (Muthén & Muthén, 2017) to assess whether the constructs in the CFR model can be differentiated from one another. Specifically, I examined the fit of the hypothesized 15-factor model and compared it with constrained models that combined any two of the three friendship features (personal growth, nonwork self-disclosure and socializing); any two of the four worknonwork variables (WPE, PWE, WPC, and PWC); and any two of the three performance variables (helping, adaptive performance, and unethical helping), which resulted in 12 comparison models. I also examined a 20-factor model, which included the 5 moderator variables (career advancement relationship function, work-related information sharing, task interdependence, segmentation preferences, and paradox mindset), and a 3-factor model comprised of the three friendship features.

All analyses were first conducted without control variables, as a robustness check and per recommendations for control variables (Becker, 2005). Control variables included in the final analyses were relationship tenure with the coworker referenced in the study (measured in years) and job insecurity, which was assessed with the item "I am worried about the possibility of losing my job." Both of these control variables were theoretically justified (Bernerth & Aguinis, 2016), given that relationship tenure is a general indicator of how long the participant has worked with their coworker and is a common control variable in the coworker relationships and interactions literatures (e.g., Watkins, in press), and job insecurity was salient to this sample population as described above. Control variables were minimized in order to save degrees of freedom and maximize power. Sets of results with and without control variables were virtually identical (i.e., no change in the significance or direction of effects reported below). Lastly, prior to examining interactions, independent variables and moderator variables were mean-centered (Aiken & West, 1991).

Hypothesis Tests

I used structural equation modeling (SEM) in Mplus Version 8.3 (Muthén & Muthén, 2017) for hypothesis testing in Study 2. Specifically, I tested the main effects proposed in Hypotheses 1-3, interactions predicted in Hypotheses 4-10, and resource gain and drain mechanisms outlined in Figures 3 and 4 (corresponding to Hypotheses and 11-18). I tested a saturated model that simultaneously controlled for resource gain (drain) mechanisms while testing drain (gain) mechanisms. I examined the interactions proposed in Hypotheses 4-10 in turn using the XWITH function, which models an interaction between two latent variables (Muthén & Muthén, 2017; Sardeshmukh & Vandenberg, 2017). Significant interactions were plotted to aid interpretation (Aiken & West, 1991). Paradox mindset was parceled, such that three items each were randomly combined to form each of the three parcels (Little, Cunningham, Shahar, & Widaman, 2002). Indirect effects were tested using Monte Carlo procedures (Selig & Preacher, 2008) with 20,000 resamples and 95% confidence intervals.

Results

Descriptive statistics and correlations between Study 2 variables are presented in Table 6. As seen in Table 6, relationship tenure with the coworker was positively correlated with personal growth (r = .15, p = .024), nonwork self-disclosure (r = .21, p = .002), and nonwork socializing (r = .18, p = .007). Additionally, the item "My coworker is my friend" was positively correlated with personal growth (r = .48, p < .001), nonwork self-disclosure (r = .54, p < .001), and nonwork socializing (r = .52, p < .001).

	Varia	ble	М	SD	1	2	3	4	5	6	7	8	9	10	11
	1.	Personal growth	3.83	.76	.85										
	2.	Nonwork self-disclosure	3.73	.87	.46**	.94									
	3.	Nonwork socializing	2.35	.97	.40**	.48**	.92								
	4.	Career advancement	3.19	.98	.48**	.39**	.28**	.87							
	5.	Work-related information-sharing	4.30	.66	.26**	.27**	.15*	.19**	.85						
	6.	Task interdependence	3.51	.89	.08	.02	04	.15*	.51**	.86					
	7.	Segmentation preferences	3.86	.81	12	.02	.03	09	.07	.11	.87				
	8.	Paradox mindset	3.36	.54	.10	.02	.07	.10	.00	09	31**	.78			
	9.	Work-personal enrichment	3.85	.71	.21**	.12	.02	.05	.10	02	30**	.33**	.83		
<u> </u>	10.	Personal-work enrichment	3.83	.65	.15*	.06	.00	.20**	.04	02	.08	.17*	.28**	.73	
34	11.	Vitality at work	3.50	.71	.17*	.01	02	.04	.04	06	27**	.33**	.63**	.30**	.88
	12.	Psychological detachment	2.92	.93	04	04	10	.09	.04	.06	.29**	16*	02	.20**	.02
	13.	Work-personal conflict	2.84	1.01	.01	07	.07	01	01	.08	.11	.02	31**	17*	35**
	14.	Personal-work conflict	1.66	.60	02	.01	01	.14*	05	05	.02	02	03	09	21**
	15.	Perceived intrusion	1.31	.56	18**	19**	21**	07	10	01	.06	10	12	06	06
	16.	Helping behaviors	4.29	.64	.24**	.20**	.23**	.19**	.17*	08	22**	.04	.22**	01	.16*
	17.	Adaptive performance	4.19	.73	.15*	00	.08	.11	.02	08	22**	.03	.13	.06	.14*
	18.	Unethical behavior to help coworker	2.00	1.02	.04	.04	02	.00	.01	00	.00	.11	.02	.02	01
	19.	Life satisfaction	3.56	.78	.14*	.03	.04	.03	.05	16*	03	.14*	.35**	.48**	.31**
	20.	Relationship conflict with coworker	1.14	.37	15*	.00	13	06	02	.18**	.06	.00	11	03	10
	21.	Relationship tenure with coworker	4.74	4.70	.15*	.21**	.18**	.07	.04	04	21**	.01	01	12	03
	24.	Job insecurity	2.69	1.23	.05	.04	06	04	.04	.14*	.23**	11	27**	02	30**

Table 6: Descriptive Statistics and Correlations Between Study 2 Variables

Notes. N = 218. Coefficient alpha values are presented along the diagonal in italics. * p < .05. ** p < .01.

Variable MSD 12 13 14 15 17 18 19 20 21 16 22 Personal growth 3.83 .76 1. 2. Nonwork self-disclosure 3.73 .87 3. Nonwork socializing 2.35 .97 Career advancement 4. 3.19 .98 5. Work-related information-sharing 4.30 .66 Task interdependence 6. 3.51 .89 Segmentation preferences 7. 3.86 .81 8. Paradox mindset 3.36 .54 Work-personal enrichment .71 9. 3.85 Personal-work enrichment 3.83 10. .65 Vitality at work 11. 3.50 .71 Psychological detachment .93 .87 2.92 12. Work-personal conflict 2.84 1.01 -.43** .93 13. .25** Personal-work conflict .85 14. 1.66 .60 .02 Perceived intrusion .15* .12 .96 1.31 .56 .10 15. 16. Helping behaviors 4.29 .64 -.00 -.08 -.04 -.12 .87 .60** Adaptive performance -.16* -.01 -.02 .89 17. 4.19 .73 .00 Unethical behavior to help coworker 18. 2.00 1.02 .02 .06 -.02 .12 -.06 -.17* .97 .20** -.35** Life satisfaction -.15* .19** 19. 3.56 .78 -.08 .10 .00 .87 .34** -.22** Relationship conflict with coworker -.27** 1.14 .02 .15* -.28** .12 .88 20. .37 .06 Relationship tenure with coworker -.20** .08 .07 .01 -.05 4.74 4.70 .07 21. .04 -.07 -.04 .26** -.17* .15* Job insecurity 2.69 1.23 -.11 -.04 -.13 -.08 .09 .10 -.09 24.

Table 6 Continued

Notes. N = 218. Coefficient alpha values are presented along the diagonal in italics.

* p < .05. ** p < .01.

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CFA results and model comparisons are provided in Table 7. The 15-factor CFA (comprised of latent factors for personal growth, nonwork self-disclosure, nonwork socializing, WPE, PWE, vitality at work, psychological detachment, WPC, PWC, perceived intrusion, helping behaviors, adaptive performance, unethical behavior to help the coworker, life satisfaction, and relationship conflict) showed acceptable fit to the data, χ^2 (1664) = 2587.68, p < .001, CFI (comparative fit index) = .91, TLI (Tucker-Lewis index) = .90, SRMR (standardized root mean square residual) = .05, RMSEA (root mean square error of approximation) = .05. Table 7 shows results of 11 alternative 14-factor CFAs, which revealed that combining factors for any two of the three friendship features, any two of the four work-personal and personalwork enrichment or conflict variables, and any two of the three work behaviors added significant misfit to the data, $176.08 \le \Delta \chi^2 s$ ($\Delta df = 12$) ≤ 912.50 , p < .001. The 3-factor CFA of the 3 friendship features (comprised of latent factors for personal growth, nonwork self-disclosure, and nonwork socializing) also demonstrated good fit to the data, χ^2 (74) = 203.71, p < .001, CFI = .95, TLI = .94, SRMR = .05, RMSEA = .09. The fit of the 20-factor CFA (which included all latent factors from the 15-factor model, as well as latent factors for the 5 moderators, career advancement relationship function, work-related information sharing, task interdependence, segmentation preferences, and paradox mindset) was χ^2 (2735) = 4195.84, p < .001, CFI = .89, TLI = .88, SRMR = .05, RMSEA = .05.

Measurement Model	χ^2	df	CFI	TLI	SRMR	RMSEA	$\Delta\chi^2$
Focal models							
3 factors (friendship features: personal growth, nonwork self- disclosure, nonwork socializing)	203.71	74	.95	.94	.05	.09	
15 factors (excludes moderators)	2587.68	1664	.91	.90	.05	.05	
20 factors (includes moderators)	4195.84	2735	.89	.88	.05	.05	
Combine any two of personal growth, nonwork self-disclosure, nonwork socializing							
14 factors, combine personal growth and nonwork self-disclosure	2886.21	1678	.88	.87	.06	.06	298.52
14 factors, combine personal growth and nonwork socializing	2912.72	1678	.88	.87	.06	.06	325.04
14 factors, combine nonwork self-disclosure and socializing	3278.97	1678	.85	.83	.07	.07	691.29
Combine any two of WPE, PWE, WPC, and PWC							
14 factors, combine WPE and PWE	2763.77	1678	.90	.90	.06	.05	176.08
14 factors, combine WPE and WPC	2986.18	1678	.87	.86	.07	.06	398.50
14 factors, combine WPE and PWC	3125.48	1678	.86	.85	.07	.06	537.80
14 factors, combine PWE and WPC	2795.00	1678	.89	.88	.06	.06	207.32
14 factors, combine PWE and PWC			Moo	del not ide	entified		
14 factors, combine WPC and PWC	3073.74	1678	.87	.85	.07	.06	486.06
<i>Combine any two of helping, adaptive performance, unethical helping</i>							
14 factors, combine helping and adaptive performance	2842.50	1678	.89	.88	.06	.06	254.82
14 factors, combine helping and unethical helping	3500.18	1678	.83	.81	.07	.07	912.50
14 factors, combine adaptive performance and unethical helping	3483.41	1678	.83	.81	.07	.07	895.73

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Table 7: Study 2 Measurement Model Results and Model Comparisons

Notes. N = 218. CFI = comparative fit index. TLI = Tucker-Lewis index. SRMR = Standardized root mean square residual. RMSEA = Root meansquare error of approximation. WPE = work-personal enrichment. PWE = personal-work enrichment. WPC = work-personal conflict. PWC = personal-work conflict. $\Delta \chi^2$ tests are compared to the 15-factor model ($\Delta df = 12$). All χ^2 and $\Delta \chi^2$ are significant at p < .001. Table 8 presents the unstandardized results of SEM, which are also summarized in Figure 14. In Figure 14, for parsimony, the direct effects of personal growth, nonwork self-disclosure, and nonwork socializing on helping behaviors, adaptive performance, unethical behavior to help the coworker, life satisfaction and relationship conflict, as well as effects that were not significant at p < .10, are not displayed. Fit of the model presented in Table 8 and Figure 14 was χ^2 (1783) = 2989.74, p < .001, CFI = .89, TLI = .87, SRMR = .08, RMSEA = .06.¹¹

¹¹ As robustness checks, I ran several additional models. The model that included resource gain mechanisms (WPE, PWE, vitality, and psychological detachment) and excluded resource drain processes (WPC, PWC, and intrusion) demonstrated acceptable fit to the data, χ^2 (925) = 1518.88, p < .001, CFI = .91, TLI = .90, SRMR = .08, RMSEA = .05, as did the model that included resource drain mechanisms and excluded resource gain mechanisms, χ^2 (560) = 982.66, p < .001, CFI = .94, TLI = .93, SRMR = .07, RMSEA = .06. Across these two models, the pattern of effects corresponding to the hypotheses were virtually identical to the results presented in Table 8 and Figure 14. I also ran a supplemental model in which personal growth (friendship deep structure) was removed (retaining friendship surface structure: nonwork self-disclosure and socializing), which altered the effects of nonwork self-disclosure and socializing (i.e., effects that were previously not significant became significant at p < .05). These differences are reported in the text immediately following the main results reported for Hypotheses 2,3, 11, and 18 in turn. In addition, I examined a pruned model, which is presented in the Supplemental Analyses section entitled "Supplemental Trimmed Model."

					Reso	urce Gai	n Mechani	sms				
	Work-personal enrichment (WPE)			Pers enrich	Personal-work enrichment (PWE)			Vitali at woi	ty rk	Psychological detachment		
-	b	SE	р	b	SE	р	b	SE	р	b	SE	р
Control variables												
Relationship tenure	01	.01	.158	02*	.01	.031	01	.01	.226	04**	.02	.005
Job insecurity	11**	.02	<.001	02	.03	.406	17**	.04	<.001	08	.06	.134
Friendship features												
Personal growth	.16**	.05	.001	.15*	.06	.016	.29**	.08	<.001	.04	.12	.702
Nonwork self-disclosure	.04	.04	.284	.02	.06	.727	03	.07	.708	.07	.11	.501
Nonwork socializing	06^{\dagger}	.03	.069	05	.05	.280	10^{\dagger}	.06	.076	14	.09	.109
<i>Resource gain mechanisms</i> WPE PWE Vitality at work												
Psychological detachment												
Resource drain mechanisms WPC PWC												
Perceived intrusion				4								
R^2	.22**		<.001	.09†		.067	.18**		.001	.06†		.069
Notes. $N = 218$. WPE = work personal-work conflict. $^{\dagger}p < .10$. $^{*}p < .05$. $^{**}p < .01$.	-persona	ll enri	chment. P	WE = pers	onal-w	ork enric	chment. W	PC =	work-perso	onal confli	ct. PW	′C =

Table 8: Unstandardized Results of Structural Equation Modeling for Study 2

Table 8 Continued

			Re	esource I	Drain N	lechanism	s				
	Wo	ork-pers oflict (W	onal /PC)	Pe coi	rsonal- nflict (]	work PWC)	Pe Ir	Perceived Intrusion			
	b	SE	р	b	SE	р	b	SE	р		
Control variables									-		
Relationship tenure	$.03^{\dagger}$.02	.061	.00	.01	.510	.02*	.01	.015		
Job insecurity	.24**	.05	< .001	01	.02	.610	$.08^*$.03	.010		
Friendship features											
Personal growth	07	.11	.513	04	.04	.304	10 [†]	.06	.098		
Nonwork self-disclosure	23*	.11	.027	.01	.04	.705	08	.06	.158		
Nonwork socializing	$.20^{*}$.09	.019	.01	.03	.732	07	.05	.129		
<i>Resource gain mechanisms</i> WPE											
PWE											
Vitality at work											
Psychological detachment											
Resource drain mechanisms											
WPC											
PWC											
Perceived intrusion											
R^2	.14**		.004	.01		.495	.14**		.004		

 $^{\dagger}p < .10. * p < .05. ** p < .01.$

Table 8 Continued

	to one, i ersonal, and relational outcomes														
	Helping behaviors		Adaptive performance		Unethical behavior to help coworker			Life	satisf	action	Relationship conflict				
	b	SE	p	b	SE	p	b	SE	p	b	SE	р	b	SE	р
Control variables															
Relationship tenure	00	.01	.911	02†	.01	.073	01	.02	.537	.02*	.01	.036	01	.00	.176
Job insecurity	03	.04	.428	04	.05	.445	.04	.06	.465	02	.04	.696	.00	.02	.919
Friendship features															
Personal growth	.12	.07	.105	.25*	.10	.011	.00	.12	.998	05	.08	.557	10**	.04	.005
Nonwork self-disclosure	.03	.06	.645	13	.09	.139	.07	.10	.473	12 [†]	.07	.089	$.10^{**}$.03	.001
Nonwork socializing	$.10^{\dagger}$.05	.060	07	.07	.314	01	.09	.866	$.10^{\dagger}$.06	.081	03	.03	.189
Resource gain mechanisms															
WPE	$.28^{\dagger}$.15	.066	.04	.21	.846	.08	.24	.758	$.48^{**}$.18	.006	05	.07	.504
PWE	16	.11	.153	02	.15	.875	.04	.18	.819	.85**	.16	<.001	.01	.05	.805
Vitality at work	.02	.09	.806	.04	.12	.750	.03	.14	.819	06	.10	.559	.04	.04	.293
Psychological detachment	.03	.09	.806	08	.07	.242	.05	.08	.543	.08	.06	.180	.02	.02	.549
Resource drain mechanisms															
WPC	.00	.05	.986	16*	.06	.027	.08	.09	.356	14*	.06	.017	$.05^{*}$.03	.041
PWC	06	.14	.640	.15	.19	.441	21	.23	.348	14	.16	.369	02	.06	.761
Perceived intrusion	02	.08	.769	.10	.11	.370	.21†	.13	.099	01	.09	.871	.18**	.04	<.001
R^2	$.18^{**}$.003	.13*		.018	.04		.206	.45**		<.001	.25**		<.001

Work, Personal, and Relational Outcomes

Notes. N = 218. WPE = work-personal enrichment. PWE = personal-work enrichment. WPC = work-personal conflict. PWC = personal-workconflict. $^{\dagger}p < .10.^{*}p < .05.^{**}p < .01.$

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Figure 14: Unstandardized Results of Structural Equation Modeling for Study 2

Notes. For parsimony, the direct effects of personal growth, nonwork self-disclosure, and nonwork socializing on the downstream outcomes, as well as effects that are not significant at p < .10, are not displayed. These effects are presented in Table 8. $^{\dagger}p < .10. ^{*}p < .05. ^{**}p < .01.$

Hypothesis Testing

Hypothesis 1 predicted that the personal growth relationship function will be positively related to (a) work-personal enrichment, (b) vitality at work, (c) psychological detachment, (d) work-personal conflict, and (e) intrusion. As seen in Table 8 and Figure 14, in support of Hypotheses 1a and 1b, respectively, personal growth was positively related to work-personal enrichment [both directions: WPE (b = .16, p = .001) and PWE (b = .15, p = .016)] and vitality at work (b = .29, p < .001). Personal growth was not significantly associated with psychological detachment (b = .04, p = .702) or work-personal conflict [either direction: WPC (b = -.07, p = .513) and PWE (b = -.04, p = .304). The relationship between personal growth and intrusion was negative and marginally significant (b = -.10, p = .098), which was the opposite direction than predicted. Accordingly, Hypotheses 1c, 1d, and 1e were not supported.

Hypothesis 2 predicted that nonwork self-disclosure with one's coworker will be positively related to (a) work-personal enrichment, (b) vitality at work, (c) psychological detachment, (d) work-personal conflict, and (e) intrusion. As presented in Table 8 and Figure 14, nonwork self-disclosure was not significantly associated with work-personal enrichment [either direction: WPE (b = .04, p = .284) and PWE (b = .02, p = .727)], vitality (b = -.03, p = .708), psychological detachment (b = .07, p = .501), or intrusion (b = -.08, p = .158). Thus, Hypotheses 2a, 2b, 2c, and 2e, respectively, were not supported. Nonwork self-disclosure was not significantly related to WPC (b = .23, p = .027), the opposite direction than predicted, and was not significantly related to PWC (b = .01, p = .705). Thus, Hypothesis 2d was not supported. Results of supplemental analysis described in Footnote 11 revealed that when personal growth (friendship deep structure) was removed from the model (and friendship surface structure—nonwork self-disclosure and socializing—was retained), the effect of nonwork self-disclosure on WPE was positive and

significant (b = .10, p = .015), consistent with Hypothesis 2a, and the effect of nonwork selfdisclosure on intrusion was negative and significant (b = ..11, p = .033).

Hypothesis 3 predicted that nonwork socializing with one's coworker will be positively related to (a) work-personal enrichment, (b) vitality at work, (c) psychological detachment, (d) work-personal conflict, and (e) intrusion. As shown in Table 8 and Figure 14, the effect of nonwork socializing on WPE was negative and marginally significant (b = -.06, p = .069) as was its effect on vitality (b = -.10, p = .076), in contrast to positive effects I had predicted (the effect of nonwork socializing on PWE was not significant, b = -.05, p = .280), and the effect of nonwork socializing on psychological detachment was not significant (b = -.14, p = .109). As such, Hypotheses 3a, 3b, and 3c, respectively, were not supported. In support of Hypothesis 3d, the effect of nonwork socializing on WPC was positive and significant (b = .20, p = .019) (the relationship between nonwork socializing and PWC was not significant, b = .01, p = .732). Hypothesis 3e was not supported, as the effect of nonwork socializing on intrusion was not significant (b = .07, p = .129). However, in the supplemental model in which when personal growth (friendship deep structure) was removed from the model, the effect of nonwork socializing on intrusion was negative and significant (b = -.09, p = .041).

Turning to the moderation hypotheses (4-10), Hypothesis 4 predicted that the career advancement relationship function will moderate the positive effects of the personal growth relationship function on (a) work-personal enrichment, (b) vitality, (c) work-personal conflict, and (d) intrusion, such that these effects will be stronger when the career advancement is higher versus lower. The interaction between personal growth and career advancement was not significant in predicting work-personal enrichment [in either direction: WPE (b = -.05, p = .430) and PWE (b = .03, p = .514)], vitality at work (b = .04, p = .710), work-personal conflict [in either direction:
WPC (b = .15, p = .172) and PWC (b = -.01, p = .830), or intrusion (b = .05, p = .388). Thus, Hypotheses 4a, 4b, 4c, and 4d were not supported. Hypothesis 4e predicted that the positive relationship between personal growth and psychological detachment would be moderated by career advancement, such that this relationship will be weaker when the career advancement function is higher rather than lower. As the interaction between personal growth and career advancement relationship functions was not significant in predicting psychological detachment (b = .03, p = .803), Hypothesis 4e was not supported.

Hypothesis 5 predicted that work-related information sharing will moderate the positive effects of nonwork self-disclosure on (a) work-personal enrichment, (b) vitality at work, (c) work-personal conflict, and (d) intrusion, such that these effects will be stronger when work-related information sharing is higher rather than lower. The interaction between nonwork self-disclosure and work-related information sharing was not significant in predicting work-personal enrichment [in either direction: WPE (b = -.08, p = .400) and PWE (b = -.07, p = .589)], vitality at work (b = -.14, p = .338), work-personal conflict [in either direction: WPC (b = .19, p = .362) and PWC (b = -.07, p = .305), or intrusion (b = .04, p = .611). Thus, Hypotheses 5a, 5b, 5c, and 5d were not supported. Hypothesis 5e predicted that the positive relationship between nonwork self-disclosure and psychological detachment would be moderated by work-related information sharing, such that this relationship will be weaker when work-related information sharing is higher rather than lower. As the interaction between nonwork self-disclosure and work-related information sharing was not significant in predicting psychological detachment (b = -.15, p = .599), Hypothesis 5e was not supported.

Hypothesis 6 predicted that task interdependence will moderate the positive effects of nonwork socializing on (a) work-personal enrichment, (b) vitality at work, (c) work-personal

conflict, and (d) intrusion, such that these effects will be stronger when task interdependence is higher rather than lower. The interaction between nonwork socializing and task interdependence was not significant in predicting work-personal enrichment [in either direction: WPE (b = -.05, p = .291) and PWE (b = -.02, p = .624)], vitality at work (b = -.10, p = .222), work-personal conflict [in either direction: WPC (b = .01, p = .959) and PWC (b = .00, p = .980), or intrusion (b = -.08, p = .244). Thus, Hypotheses 6a, 6b, 6c, and 6d were not supported. Hypothesis 6e predicted that the positive relationship between nonwork socializing and psychological detachment would be moderated by task interdependence, such that this relationship will be weaker when task interdependence is higher rather than lower. As the interaction between nonwork socializing and task interdependence was not significant in predicting psychological detachment (b = -.18, p = .140), Hypothesis 6e was not supported.

Hypothesis 7 predicted that work-nonwork segmentation preferences will moderate the relationships between nonwork self-disclosure and (a) work-personal enrichment, (b) psychological detachment, and (c) work-personal conflict, such that when a preference for integration (vs. segmentation) is higher, the effect of nonwork self-disclosure on work-personal enrichment and psychological detachment will be stronger and its effect on work-personal conflict will be weaker. The interaction between nonwork self-disclosure and segmentation preferences was not significant in predicting work-personal enrichment [in either direction: WPE (b = .05, p = .456) and PWE (b = -.05, p = .548)], psychological detachment (b = -.04, p = .824), or work-personal conflict [in either direction: WPC (b = -.11, p = .536) and PWC (b = -.03, p = .547). Thus, Hypotheses 7a, 7b, and 7c were not supported.

Hypothesis 8 predicted that work-nonwork segmentation preferences will moderate the relationships between nonwork socializing and (a) work-personal enrichment, (b) psychological

detachment, and (c) work-personal conflict, such that when a preference for integration (vs. segmentation) is higher, the effect of nonwork socializing on work-personal enrichment and psychological detachment will be stronger and its effect on work-personal conflict will be weaker. The interaction between nonwork socializing and segmentation preferences was not significant in predicting work-personal enrichment [in either direction: WPE (b = -.04, p = .347) and PWE (b = -.08, p = .137)], psychological detachment (b = -.12, p = .298), or work-personal conflict [in either direction: WPC (b = .10, p = .518) and PWC (b = .04, p = .333). Thus, Hypotheses 8a, 8b, and 8c were not supported.

Hypothesis 9 predicted that paradox mindset will moderate the relationships between nonwork self-disclosure with coworker and (a) vitality and (b) intrusion, such that when paradox mindset is higher rather than lower, the positive relationship between nonwork self-disclosure and vitality will be stronger, and the positive relationship between nonwork self-disclosure and intrusion will be weaker. The interaction between nonwork self-disclosure and paradox mindset was significant in predicting vitality (b = .29, p = .037). As Figure 15 shows, when paradox mindset was higher (+1 SD), the relationship between nonwork self-disclosure and vitality was not significant (b = .11, p = .292). When paradox mindset was lower (-1 SD), the relationship between nonwork self-disclosure and vitality was negative and marginally significant (b = -.20, p = .087). Probing the interaction using regions of significance (Preacher, Curran, and Bauer, 2006) (instead of plotting the interaction at one SD above and below the means) indicates that the negative relationship between nonwork self-disclosure and vitality at work becomes significant when paradox mindset is -.96 and lower (SD of paradox mindset is -.54; thus, this relationship is significant at approximately 1.78 standard deviations below the mean of paradox mindset). Although the exact form of the interaction was not fully consistent with Hypothesis 9a, the

conclusion that people with lower paradox mindset benefit less or are more harmed by friendship with their coworker (in terms of decreased vitality) aligns with my overarching predictions regarding paradox mindset.



Figure 15: Study 2 Interaction of Self-Disclosure and Paradox Mindset Predicting Vitality

With regard to Hypothesis 9b, the interaction between nonwork self-disclosure and paradox mindset was significant in predicting intrusion (b = .28, p = .024). As shown in Figure 16, when paradox mindset was higher (+1 *SD*), the relationship between nonwork self-disclosure and intrusion was not significant (b = .05, p = .576). When paradox mindset was lower (-1 *SD*), the relationship between nonwork self-disclosure and intrusion was negative and significant (b = .25, p = .015). This suggests that people with lower paradox mindset benefit more from nonwork self-disclosure in terms of less intrusion. Although this interaction was significant, neither the form of the interaction, nor the conclusion surrounding this interaction was consistent with Hypothesis 9b. However, the combination of Study 2 results for Hypotheses 9a and 9b suggest that people with

lower paradox mindset have both amplified benefits and costs of nonwork self-disclosure, which aligns with the focus of the CFR model on simultaneous resource gain and drain.



Figure 16: Study 2 Interaction of Self-Disclosure and Paradox Mindset Predicting Intrusion

Hypothesis 10 predicted that paradox mindset will moderate the relationships between nonwork socializing with coworker and (a) vitality and (b) intrusion, such that when paradox mindset is higher rather than lower, the positive relationship between nonwork socializing and vitality will be stronger, and the positive relationship between nonwork socializing and intrusion will be weaker. The interaction between nonwork socializing and paradox mindset was not significant in predicting vitality (b = -.04, p = .347) or intrusion (b = .06, p = .533). As such, Hypotheses 10a and 10b were not supported.

Turning to the mediation hypotheses (11-18), Hypothesis 11 predicted that nonwork selfdisclosure with one's coworker will have an indirect effect on (a) helping behaviors, (b) adaptive performance, and (c) life satisfaction, via work-personal enrichment. Given that the effects of nonwork self-disclosure on WPE and PWE were not significant (see Table 8), the indirect effects of nonwork self-disclosure via WPE and PWE on helping behaviors, adaptive performance, and life satisfaction were not significant. As such, Hypotheses 11a, 11b, and 11c were not supported in the main model. However, in the supplemental model in which personal growth (friendship deep structure) is removed, the indirect effects of nonwork self-disclosure via WPE on helping behaviors, ab = .03, 90% CI [.003, .067] and life satisfaction, ab = .05, 90% CI [.010, .096], were significant when 90% CIs were used, which offers support for Hypotheses 11a and 11c.

Hypothesis 12 predicted that nonwork socializing with the coworker will have an indirect effect on (a) helping behaviors, (b) adaptive performance, and (c) life satisfaction, via work-personal enrichment. As effects of nonwork socializing on WPE and PWE were not significant (see Table 8), indirect effects corresponding to Hypotheses 12a, 12b, and 12c were not supported.

Hypotheses 13 and 14 predicted that nonwork self-disclosure and nonwork socializing with one's coworker, respectively, will have an indirect effect on (a) helping behaviors, (b) adaptive performance, and (c) life satisfaction, via vitality. Considering that the effects of vitality on helping behaviors, adaptive performance, and life satisfaction were not significant (see Table 8), the indirect effects that included vitality were not significant. Thus, Hypotheses 13 and 14 were not supported.

Hypothesis 15 predicted that nonwork socializing with one's coworker will have an indirect effect on (a) life satisfaction and (b) relationship conflict, via psychological detachment. As the effect of nonwork socializing on psychological detachment, and the effects of psychological detachment on life satisfaction and relationship conflict were not significant (see Table 8), the indirect effects proposed in Hypothesis 15 were not supported.

Hypothesis 16 predicted that nonwork self-disclosure will have an indirect effect on (a) unethical behavior and (b) relationship conflict, via work-personal conflict. Given that the effects of WPC and PWC on unethical behavior was not significant, the indirect effect predicted in Hypothesis 16a was not supported. The indirect effect of nonwork self-disclosure on relationship conflict via WPC was not significant, as the 95% CI contained 0, ab = -.01, 95% CI [-.032, .001], notably however, the 90% CI did not contain 0, 90% CI [-.027, -.001]. However, this effect was in the opposite direction than expected. Thus, Hypothesis 16b was not supported.

Hypothesis 17 predicted that nonwork socializing will have an indirect effect on (a) unethical behavior and (b) relationship conflict, via work-personal conflict. As the effects of WPC and PWC on unethical behavior were not significant, the indirect effect corresponding to Hypothesis 17a was not supported. The indirect effect of nonwork socializing on relationship conflict via WPC was not significant, as the 95% CI contained 0, ab = .01, 95% CI [-.000, .027], notably however, the 90% CI did not contain 0, 90% CI [.001, .023]. This effect was in the expected direction consistent with Hypothesis 17b.

Hypothesis 18 predicted that nonwork self-disclosure will have an indirect effect on (a) unethical behavior to help the coworker¹² and (b) relationship conflict, via intrusion. Given that the effect of nonwork self-disclosure on intrusion was not significant, the mediating mechanism of intrusion was not significant, and as such, Hypothesis 18 was not supported. In the supplemental model in which personal growth (friendship deep structure) was removed, the indirect effect of nonwork self-disclosure on relationship conflict via intrusion was negative (ab = -.02) and the 95% CI did not contain 0 [-.046, -.002].

¹² The correlation between coworker-ratings (results of which are reported) and self-ratings (collected as supplemental data) of unethical behavior to help the coworker was positive, weak, and marginally significant, r = .12, p = .074.

Supplemental Analyses

I conducted several sets of supplemental analyses, including examining discriminant validity of the three proposed friendship features, a series of supplemental interactions, supplemental indirect effects and the supplemental mechanism of accountability, a trimmed model, and dyadic analysis that builds from the CFR model. The results of each set are summarized in turn below.

Supplemental CFA Comparisons: Discriminant Validity of Friendship Features

To examine whether the three friendship features (personal growth, nonwork selfdisclosure, and nonwork socializing) can be distinguished from related constructs (CWX and emotional support), I conducted a set of supplemental CFAs. The 5-factor model that included the friendship features, CWX, and emotional support demonstrated good fit to the data, χ^2 (220) = 482.38, p < .001, CFI = .93, TLI = .92, SRMR = .06, RMSEA = .07. Six alternative 4-factor models in which any of the three friendship features were combined with emotional support or CWX added significant misfit to the data, $129.10 \le \Delta \chi^2$ s ($\Delta df = 4$) ≤ 549.68 , p < .001.

Supplemental Interactions

In a series of supplemental analyses, I tested for several interactions that were not hypothesized. First, I examined whether the deep structure friendship feature (personal growth relationship function) moderated the effects of the surface structure friendship features (nonwork self-disclosure and socializing with coworker). Next, I investigated the moderating effect of paradox mindset for work-personal conflict and enrichment (i.e., building from Hypotheses 9 and 10, which focused on vitality and intrusion). Lastly, I tested whether demographic similarity with one's coworker (i.e., on gender and race) interacted with the friendship features in predicting resource gain and drain mechanisms.

First, the interaction between nonwork self-disclosure and personal growth was not significant in predicting WPE, PWE, vitality, psychological detachment, WPC, PWC, or intrusion. The interaction between nonwork socializing and personal growth was not significant in predicting WPE, PWE, vitality, psychological detachment, PWC, or intrusion. The interaction between nonwork socializing and personal growth was significant in predicting WPC (b = .20, p = .025). As Figure 17 indicates, when personal growth was higher (+1 *SD*), the relationship between nonwork socializing and WPC was positive and significant (b = .29, p = .003). When personal growth was lower (-1 *SD*), the relationship between nonwork socializing and WPC was positive and significant (b = .29, p = .003). When personal growth was lower (-1 *SD*), the relationship between nonwork socializing and WPC was positive and significant (b = .29, p = .003). When personal growth was lower (-1 *SD*), the relationship between nonwork socializing and WPC was not significant (b = .01, p = .940).



Figure 17: Study 2 Interaction of Socializing and Personal Growth Predicting WPC

Next, although the interaction between nonwork socializing and paradox mindset was not significant in predicting vitality and intrusion (Hypothesis 10), this interaction was significant in predicting WPC (b = .28, p = .028). As Figure 18 shows, when paradox mindset was higher (+1 *SD*), the relationship between nonwork socializing and WPC was positive and significant (b = .30, p = .005). When paradox mindset was lower (-1 *SD*), the relationship between nonwork socializing and WPC was not significant (b = .00, p = .974). Similarly, the interaction between personal growth and paradox mindset was significant in predicting WPC (b = .45, p = .038). As shown in Figure 19, when paradox mindset was higher (+1 *SD*), the relationship between personal growth and WPC was not significant (b = .20, p = .215). When paradox mindset was lower (-1 *SD*), the relationship between personal growth and WPC was not significant (b = .20, p = .215). When paradox mindset was lower (-1 *SD*), the relationship between personal growth and WPC was not significant (b = .20, p = .215). When paradox mindset was lower (-1 *SD*), the relationship between personal growth and WPC was not significant (b = .20, p = .215). When paradox mindset was lower (-1 *SD*), the relationship between personal growth and WPC was not significant (b = .20, p = .215). When paradox mindset was lower (-1 *SD*), the relationship between personal growth and WPC was negative and marginally significant (b = .28, p = .094).



Figure 18: Study 2 Interaction of Self-Disclosure and Paradox Mindset Predicting WPC



Figure 19: Study 2 Interaction of Personal Growth and Paradox Mindset Predicting WPC

Although these interactions were significant, the simple slopes suggest that the forms of the interactions were the opposite of what I would have expected; that is, the detrimental effects of personal growth and nonwork socializing on WPC (i.e., increased WPC) were stronger for people with higher paradox mindset, whereas I had generally predicted the harmful effects of friendship features would be weaker for people with higher paradox mindset.

Lastly, turning to the moderating role of demographic similarity, the interaction between nonwork self-disclosure and gender similarity was significant in predicting PWC (b = .17, p = .026). As Figure 20 shows, the relationship between nonwork self-disclosure and PWC was negative and marginally significant (b = .11, p = .076) for participants who identified as a different gender than their coworker and not significant (b = .05, p = .578) for participants who identified as the same gender as their coworker. The interaction between nonwork self-disclosure and gender similarity was not significant in predicting WPE, PWE, vitality, psychological detachment, WPC, or intrusion. Gender similarity and race similarity were not significant in moderating the effects of personal growth and nonwork socializing on WPE, PWE, vitality, psychological detachment, WPC, PWC, or intrusion.



Figure 20: Study 2 Interaction of Self-Disclosure and Gender Similarity Predicting WPC

Supplemental Indirect Effects

In the CFR model, I expected resource gain variables to be the mediating mechanisms between the three friendship features and helping behaviors, adaptive performance, and life satisfaction, whereas I expected resource drain variables to be the mediating mechanisms between the three friendship features and unethical behavior to help the coworker and relationship conflict. However, as shown in Table 8 and Figure 14, WPC was negatively related to adaptive performance (b = -.16, p = .027) and life satisfaction (b = -.14, p = .017). Given that nonwork self-disclosure was negatively related to WPC (b = -.23, p = .027), and nonwork socializing was positively related to WPC (b = .20, p = .019), I examined the indirect effects of nonwork self-disclosure and socializing on adaptive performance and life satisfaction through the mediating mechanism of WPC, using the same procedures as testing Hypotheses 11-18. The indirect effect of nonwork selfdisclosure on adaptive performance was positive and significant, as the 95% CI did not contain 0, ab = .038, 95% CI [.003, .077]. The indirect effect of nonwork self-disclosure on life satisfaction was positive and significant, ab = .033, 95% CI [.001, .081]. The indirect effect of nonwork socializing on adaptive performance was negative and significant, ab = -.033, 95% CI [-.064, -.005]. The indirect effect of nonwork socializing on life satisfaction was negative and significant, ab = -.028, 95% CI [-.069, -.001]. Together, these results point to countervailing effects of nonwork socializing and self-disclosure at work and for well-being.

While Hypotheses 11-18 focused on the indirect effects of surface structure friendship features (nonwork self-disclosure and socializing with coworker), in supplemental analyses, I examined the indirect effects of the deep structure friendship feature (personal growth relationship function of the coworker). The results for significant indirect effects are as follows. The indirect effect of personal growth on life satisfaction via WPE was positive and significant, as the 95% did not contain 0 (b = .08, 95% CI [.016, .164]). Similarly, the indirect effect of personal growth on life satisfaction via significant, as the 95% did not contain 0 (b = .13, 95% CI [.023, .256]). The pattern of these effects was consistent with predictions from Hypotheses 11c and 12c (i.e., work-personal enrichment mediates the effect of friendship features on life satisfaction).

Supplemental Mechanism: Felt Accountability

In the CFR model I focused on resource gain and drain mechanisms, yet it is possible that other mechanisms could mediate the effects of friendship features on work and nonwork outcomes. I examined felt accountability as an alternative mechanism alongside the focal resource gain and drain mechanisms, which revealed a positive and significant effect of personal growth on felt accountability (b = .20, p = .022) and a negative and marginally significant effect of nonwork socializing on felt accountability (b = .11, p = .069). Felt accountability was not significantly associated with any of the downstream work, personal, or relational outcomes.

Supplemental Trimmed Model

As supplemental analysis, I examined a trimmed model using SEM, the results of which are presented in Figure 21. This model was pruned to focus on the effects of the surface structure friendship features (i.e., nonwork self-disclosure and nonwork socializing with one's coworker) and work-to-personal resource mechanisms (i.e., WPC, the nonwork experience of recovery, and WPC). As in the main analysis, this model included relationship tenure and job insecurity as control variables, as well as several additional control variables: segmentation preferences, percentage of work performed from home, social distancing in one's personal life, and household size. The supplemental model demonstrated good fit to the data, χ^2 (792) = 1236.14, p < .001, CFI = .93, TLI = .92, SRMR = .07, RMSEA = .05. As Figure 21 indicates, when the deep structure friendship feature (i.e., personal growth) is removed, the effect of nonwork self-disclosure on WPE becomes significant (b = .12, p = .005). In addition, whereas the effects of friendship features on the recovery experience of psychological detachment was not significant in the main analyses, the effect of nonwork socializing on recovery itself was significant (b = .10, p = .047). Similar to the main results, nonwork self-disclosure and nonwork socializing with the coworker had countervailing effects on WPC: the effect of nonwork self-disclosure on WPC was negative (b = -.24, p = .017), whereas the effect of nonwork socializing on WPC was positive (b = .20, p = .017). Overall, the trimmed model presented in Figure 21 highlights the differential effects of nonwork self-disclosure and socializing, such that nonwork self-disclosure had beneficial effects (i.e.,

increased WPE and reduced WPC), whereas nonwork socializing had countervailing effects (i.e., increased recovery and increased WPC).

Supplemental Dyadic Model

Given that the Study 2 dataset was fully dyadic (i.e., all variables were collected from both the focal employee and his/her coworker), I had the opportunity to conduct dyadic analyses that build from the main results for the CFR model reported above. Specifically, I examined an actorpartner interdependence model (APIM) using SEM (Kenny, Kashy, & Cook, 2006; Krasikova & LeBreton, 2012; Peugh, DiLillo, & Panuzio, 2013). APIM is an increasingly common dyadic analytic technique published in OBHR journals, particularly in examining coworker dyads (e.g., Burmeister et al., 2020; Ng & Wang, 2019). APIM uses a standard dyadic design with matched dyads in which focal variables are modeled for both dyad members (i.e., both the employee and coworker are focal participants). Thus, both actor effects (i.e., the effect of person A's X on person A's Y and the effect of person B's X on person B's Y) and partner effects (i.e., the effect of A's X on B's Y and the effect of B's X on A's Y) are modeled simultaneously. Errors of the same indicators for each dyad member were permitted to covary.

In the supplemental APIM model, I examined the effects of employee and coworker nonwork self-disclosure on their helping behaviors via their relational energy. I first conducted a CFA of the six-factor model (nonwork self-disclosure, relational energy, and helping behaviors of both the employee and coworker), which showed good fit to the data, χ^2 (420) = 730.33, p < .001, CFI = .94, TLI = .93, SRMR = .06, RMSEA = .06. Given that the effects for the employee and coworker would not be theoretically expected to differ, they are considered to be indistinguishable; thus, I specified equality constraints on the respective paths for employee and coworker (Peugh et al., 2013). I controlled for their relationship tenure. Figure 22 summarizes unstandardized results of the APIM, which fit the data well, χ^2 (423) = 745.53, p < .001, CFI = .94, TLI = .93, SRMR = .06, RMSEA = .07. As Figure 22 shows, one's own nonwork self-disclosure was positively associated with one's own relational energy (b = .22, p < .001), but was not significantly associated with coworker relational energy (b = .02, p = .564) In turn, one's own relational energy was positively associated with both one's own helping behaviors (i.e., actor effect) (b = .11, p = .027) and one's coworker's helping behaviors (i.e., partner effect) (b = .42, p < .001).¹³

¹³ Using the same procedures for testing moderation as in the main analyses, I also examined whether extraversion, paradox mindset, stress, and number of friends at work moderated the actor effects of nonwork self-disclosure on relational energy. None of the tested moderators were significant.



Figure 21: Unstandardized Results of Supplemental Study 2 Trimmed Model

Notes. The direct effects of nonwork self-disclosure and socializing on the downstream dependent variables were included in the analyses but for parsimony are not displayed. Solid lines indicate effects that were significant at p < .05 and dashed lines indicate effects that were not significant at p < .05. * p < .05. ** p < .01.



Figure 22: Unstandardized Results of Supplemental Study 2 Dyadic Analysis

Notes. Solid lines indicate effects that were significant at p < .05 and dashed lines indicate effects that were not significant at p < .05. As employee and coworker were theoretically indistinguishable, equality constraints were used on their respective effects. $^{\dagger}p < .10. ^{*}p < .05. ^{**}p < .01.$

DISCUSSION

For decades scholars have recognized that socioemotional (friendship-based) and instrumental (work-based) features simultaneously coexist within coworker friendships (Bridge & Baxter, 1992; Methot et al., 2016; Pillemer & Rothbard, 2018; Schinoff et al., 2020). Yet, the specific friendship-based features in these relationships have been overlooked. Unpacking these features and their implications for employees at work and in their personal lives is important, considering the ubiquity of friendship at work (Schwabel, 2018). Recent research has concluded that coworker friendships are exclusively beneficial or burdensome. I challenge prior conclusions by revealing distinct effects of coworker friendship features. In this dissertation, I build from interaction ritual theory (Collins, 2004) to develop the Coworker Friendship-Resource (CFR) Model in which I identified three primary features of friendship in coworker relationships: personal growth relationship function, nonwork self-disclosure with a coworker, and nonwork socializing with a coworker. I proposed that these three friendship features affect employees' work, personal, and relational outcomes (helping behaviors, adaptive performance, unethical behavior, life satisfaction, and relationship conflict) through resource gain (work-personal enrichment, vitality at work, and psychological detachment) and resource drain (work-personal conflict and intrusion) mechanisms. Findings across a vignette experiment (Study 1) and two-wave field study of university alumni and staff (Study 2), demonstrated differential effects, such that some friendship features had mixed effects, whereas others had unique beneficial effects. Below, I discuss the findings of these studies, their implications for theory and practice, as well as limitations and opportunities for future research.

Theoretical Implications

Across both vignette and field studies, the personal growth relationship function (friendship deep structure) was positively associated with resource gain (WPE, PWE, and vitality at work), consistent with predictions. However, effects of nonwork self-disclosure and socializing with one's coworker (friendship surface structure) told a more complex story. Nonwork self-disclosure was positively associated with WPE in the vignette experiment and a trimmed supplemental model in the field study (Figure 21), as well as associated with WPC in the field study. However, contrary to predictions, the effect of nonwork self-disclosure on WPC was negative rather than positive. A theoretical explanation for this unexpected negative effect is that disclosing personal matters to a coworker could increase feeling understood by the coworker (Ickes, 1993; Kim et al., 2019; Reis, Lemay, & Finkenauer, 2017), which in turn may make it easier to navigate work and personal roles (i.e., reduce WPC). Importantly, results of the field study suggest that even during troublesome times (i.e., the Covid-19 pandemic) employees can generate resources (i.e., increased WPE) and reduce burdens (i.e., decreased WPC) by connecting with one another (Gibson, 2020) through nonwork self-disclosure.

Nonwork socializing was positively associated with resource gain (WPE, PWE, and vitality at work) but only in the vignette experiment. In the field study, nonwork socializing was associated with both an increase in WPC and the nonwork experience of recovery. That is, interestingly, in the field study nonwork self-disclosure and nonwork socializing had countervailing effects on resource drain (decreased and increased WPC, respectively) as well as distinct effects on resource gain (WPE and recovery) and subsequent work and personal outcomes. Together, these findings suggest that the surface structure of friendship influences both resource gain and drain in the workto-personal (versus personal-to-work) direction. This is consistent with how coworker friendships often begin as work-oriented relationships that then add a friendship component (Kram & Isabella, 1985).

The positive relationship between personal growth and vitality at work, the affective resource gain mechanism, are consistent with the prediction from interaction ritual theory (Collins, 2004) that social interactions energize (i.e., increase vitality of, Porath, 2012) individuals. The nonsignificant effects of nonwork self-disclosure and socializing on vitality in the field study have several potential explanations. This could be an artifact of the sample and study time period (i.e., due to Covid-19, most participants were required to work from home rather than in a physical office with their coworkers, and virtual interactions may have less potential for generating energy than in-person interactions, Gibson, 2020). Nonwork socializing in particular would likely have been affected by national and statewide social distancing guidelines that restricted physical social contact; for example, prior to the pandemic, coworkers who may have regularly gone to lunch together may not have continued doing so as often virtually during the pandemic. Another explanation is that in the vignette experiment, participants were asked to imagine how they would feel based on a hypothetical scenario. Thus, perhaps participants imagined they would feel energized by self-disclosing or socializing, but this imagined vitality might not materialize when participants actually self-disclose or socialize. Alternatively, it is possible that any generated vitality dissipates quickly. Lastly, nonwork self-disclosure was positively associated with relational energy in supplemental dyadic analyses, which suggests energy generated is specific to one's social interactions with the coworker, in contrast to vitality, which is a more global operationalization of energy.

The proposed cognitive resource gain mechanism of psychological detachment was largely not significant in either the vignette or field studies (an exception is the negative effect of nonwork

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socializing on psychological detachment in the vignette experiment). Additionally, in the field study, psychological detachment was not significantly associated with any of the work, personal, or relational outcomes. An empirical explanation is that in the field study, participants' work and nonwork lives were so blended from working from home due to the pandemic that it was difficult for people to cognitively disengage from work in general. Alternatively, perhaps the effects of nonwork socializing on psychological detachment is instead more momentary in nature, such that employees cognitively disengage from work as the socializing is happening or immediately afterwards. A theoretical explanation is that the effects of friendship with coworkers are perhaps more affective (i.e., vitality) or spillover-based (i.e., WPE and WPC) rather than cognitive in nature. The proposed relational resource drain mechanism of perceived intrusion was also not significant across the vignette and field studies. In the field study, the intrusion base rate and variance were both relatively small. This restriction in range may have impeded my ability to detect effects. Alternatively, perhaps perceived intrusion only emerges when self-disclosures are disruptive or violate norms in the coworker relationship (Gibson, 2018), or when one feels pressured to self-disclose personal information to a coworker (e.g., if a coworker excessively asks invasive questions).

Several differential direct effects emerged in the field study that are worth mentioning. Whereas nonwork self-disclosure with the coworker was positively related to relationship conflict, the personal growth relationship function was negatively related to relationship conflict. This is interesting because in order to grow personally from one's relationship with a coworker, it's likely that some degree of nonwork self-disclosure may need to occur in the process, as I discuss further below (and consistent with the moderate and positive bivariate relationship between personal growth and nonwork self-disclosure in Study 2). Additionally, the personal growth relationship function was positively associated with adaptive performance.

In both the vignette and field studies, paradox mindset played a moderating role in the effects of the three friendship features, particularly nonwork self-disclosure. On one hand, participants with higher paradox mindset generally experienced beneficial effects of nonwork selfdisclosure: paradox mindset amplified the positive effect (vignette study) and buffered the negative effect (field study) of nonwork self-disclosure on vitality; buffered the positive effect of nonwork self-disclosure on intrusion (vignette study); and buffered the negative effect of nonwork selfdisclosure on intrusion (field study). On the other hand, people higher in paradox mindset fared worse when it came to the effects of nonwork socializing and personal growth: paradox mindset amplified the positive effect of nonwork socializing on WPC (field study) and weakened the negative effect of personal growth on WPC (field study). That is, paradox mindset may be a double-edged sword for friendship features. The other theorized moderators of career advancement, work-related information sharing, task interdependence, and segmentation preferences received inconsistent support across the two studies. Whereas the vignette study revealed several significant interactions for these moderators (some of which were consistent with the expected form of the interaction), the field study did not. Below, I discuss alternative ways to examine work-friendship overlap in future research. An interesting moderating effect revealed by supplemental analysis is that personal growth amplified the positive effect of nonwork socializing on WPC (i.e., socializing outside of work with a coworker made it more difficult to manage work and personal roles when that coworker was also a source of personal growth). This suggests that it may be overwhelming when a coworker activates multiple friendship features (i.e., eudaimonic: personal growth and hedonic: nonwork socializing).

Finally, the supplemental dyadic model revealed actor effects of nonwork self-disclosure on relational energy, which in turn had both actor and partner effects on helping behaviors. In other words, disclosing to one's coworker is energizing for oneself, but not for one's coworker. This energy drives both one's own helping and one's coworker's helping, suggesting that energy resulting from self-disclosure is contagious and ultimately benefits both the discloser and the listener. These findings extend ideas proposed in the CFR model and are consistent with prediction from interaction ritual theory (Collins, 2004) that social interactions energize individuals, and this energy motivates work behaviors.

Practical Implications

The findings of this dissertation hold critical implications for practice. When it comes to helping employees increase resource gain and decrease resource drain from workplace friendship, my theorizing and results suggest a multi-faceted approach. The distinct implications of the three friendship features—personal growth relationship function, nonwork self-disclosure, and nonwork socializing—suggest that employees and managers should navigate each feature differently. Nonwork self-disclosure was associated with both increased resource gain (WPE) and less resource drain (WPC), which suggests employees only stand to benefit from it. Thus, organizations should encourage employees to voluntarily share their personal lives with their coworkers if employees are comfortable doing so. Nonwork self-disclosure with coworkers may be especially important for virtual workers. Scholars have recently suggested that working virtually, including during the pandemic, offers far fewer spontaneous social interactions than working co-located, and as such, virtual social interactions require more intentionality (Sala, Schinoff, Gibson, Methot, Heaphy, & Melwani, 2020; see also Gibson, 2020). Nonwork self-disclosure may be one important way for virtual coworkers to intentionally connect with one another.

Given the consistently beneficial effects of personal growth relationship function on resource gain revealed by my results, organizations might consider offering voluntary avenues for employees to share with each other stories of experiencing meaningful personal growth following life events, such as becoming a parent (Nomaguchi & Milkie, 2003; Taubman-Ben-Ari, 2012) or grieving a deceased loved one (Giannini, 2020; Hazen, 2008) (see also e.g., Maitlis, 2020). Self-disclosing these personal stories of growth may help jumpstart ways for coworkers to personally grow from one another, and ultimately enhance their friendship.

The mixed results surrounding the effects of nonwork socializing suggest employees and managers should approach this friendship feature with nuance and caution. On one hand, nonwork socializing with a coworker taxed employees' resources that in ways impeded their ability to participate in personal activities and interests (i.e., WPC). On the other hand, supplemental analyses revealed that nonwork socializing provides employees with a respite from work (i.e., recovery). To balance these conflicting tensions, organizations that schedule social events around the workday (e.g., Michel et al., 2019) should ensure such events do not excessively cut into employees' personal time, in order to avoid or minimize WPC.

Limitations and Directions for Future Research

Although this dissertation has notable strengths, including content validation of several scales, a vignette experiment, and a two-wave field study with coworker ratings of work behaviors, it also has several limitations that are important to note. In the vignette study, I did not manipulate the work-related moderators (career advancement relationship function, task interdependence, and work-related information sharing) and instead instructed participants to refer to their current coworkers. Thus, causal conclusions cannot be drawn with respect to the interaction results of the vignette study. To address this limitation in future studies, the Study 1 design could be extended

to manipulate both friendship features and work-related features in a randomized factorial design (e.g., 2x2 of high and low conditions for nonwork self-disclosure and work-related information sharing).

In terms of field study limitations, although measurement of independent variables and mediators was separated by approximately two weeks, and work behaviors were coworker-rated, life satisfaction and relationship conflict were assessed at the same time as the mediators. Thus, common method bias as an explanation for the relationships between the mediators and life satisfaction and relationship conflict cannot be ruled out (Podsakoff et al., 2003). In addition to coworker reports of unethical behavior to help the coworker, I collected self-ratings of this variable as supplemental data. As Footnote 12 indicates, the positive correlation between coworker- and self-ratings of unethical behavior avoids concerns regarding common method bias, yet on the other hand, this behavior may not always be observable to the coworker, given its nature. That is, the coworker might not always be aware he or she was the beneficiary of the focal participant hiding negative information about the coworker's performance, for example.

In addition, participants were instructed to recruit one coworker into the study (e.g., Rodell & Lynch, 2016), one with whom they collaborate most. It is possible that participants chose their closest coworker, which may have led to a restriction in range on the friendship features variables. An inspection of means and standard deviations of these variables suggests this was unlikely to be the case, however. This limitation can be avoided in future studies using a coworker report or matched coworker dyads by asking participants for the email addresses of three coworkers and then randomly selecting which coworker to invite (e.g., Watkins, in press). Another limitation is that data was collected during the Covid-19 pandemic, which may affect the generalizability of

my findings. I mitigated this to some degree through control variables (e.g., job insecurity) and collecting other supplemental measures. That said, the study timeframe provided a unique opportunity to learn about social interactions with coworkers and experiences at the work-personal interface during the pandemic.

Future research should build from findings of this dissertation in several additional ways. First, as Footnote 1 describes, given my focus on coworkers or work peers, work relationships with hierarchical differences, such as leader-employee relationships, were outside the scope of the CFR model. Future research can extend my findings by layering in status or power in the study of work friendship. Interestingly, an item in one of the most commonly used leader-member exchange scales (LMX-MDM, Liden & Maslyn, 1998; see also SLMX-MDM, Greguras & Ford, 2006) is "My supervisor is the kind of person one would like to have as a friend." This item is part of the LMX affect subscale, which assesses mutual personal affection above and beyond the workoriented aspect of the relationship. Although Liden and Maslyn (1998) emphasized the mutual nature of LMX affect, prior research suggests that this might not always be the case. For example, leaders listening to employees' nonwork problems (which would entail employee nonwork selfdisclosure) holds beneficial implications for employees (e.g., reduced work-nonwork conflict and increased work-nonwork enrichment, Hammer, Kossek, Yragui, Bodner, & Hanson, 2009; see also Wanberg, Welsh, & Kammeyer-Mueller, 2007) yet holds harmful implications for leaders (e.g., increased negative affect, Lanaj & Jennings, 2020). Future research should pursue dyadic designs, such as actor-partner interdependence modeling, to examine the unique implications of leaders' and employees' nonwork self-disclosure, and friendship more generally, with one another. Such a design could simultaneously examine the impact of leaders' own nonwork self-disclosure on leaders themselves and their employees. For example, perhaps leaders would benefit from their

own nonwork self-disclosure (e.g., reduced burnout), yet employees would experience harmful implications (e.g., increased burnout).

In addition, the implications of friendship in leader-employee relationships may depend on whether the friendship developed in a pre-existing hierarchical relationship or whether hierarchy was added onto a pre-existing friendship. The latter would be expected to act as a shock to both parties' role expectations (Unsworth et al., 2018), which would make it more difficult to continue to fulfill both the friendship role and leader or employee role. That is, both individuals (peer who becomes the leader and peer who becomes the subordinate) would be expected to experience greater resource drain and less resource gain from managing these new, more incompatible roles. Alternatively, leader-employee relationships may expand into a friendship gradually over time, which is expected to be easier for both parties to manage, and their resource gain and drain may be less affected. Friendship between leaders and their employees is also expected to have implications for parties outside of the dyad. For example, work group members who observe their supervisor and their peer going to a lunch that they were not invited to would be expected to perceive this as favoritism or preferential treatment, which could have implications for work group members' envy and resentment of the favored employee. Yet the employee who was singled out for a lunch invitation might experience pride, guilt, or ambivalence. Together, these disparate emotional reactions would be expected to negatively affect work group cohesion (van Breukelen, van der Leeden, Wesselius, & Hoes, 2012). Examining these possibilities using social relations modeling, which is able to parse individual, dyadic/relationship, and group effects (Kenny et al., 2006), is a promising extension for future research.

Additionally, I suggest future research examine motives for nonwork self-disclosure and socializing with a coworker. For example, do employees self-disclose and/or socialize with work

peers in order to deepen relationships (e.g., being friendly as an end in itself) or impression-manage (e.g., being friendly as a means to an end of increasing status at work)? To answer these questions, future work should examine whether prosocial and instrumental motives (Gabriel, Koopman, Rosen, Arnold, & Hochwarter, 2020) moderate the effects of nonwork self-disclosure and socializing. This would also address a limitation in prior research: it is assumed that work friendships integrate socioemotional and instrumental goals or motives, yet to my knowledge this has not been explicitly examined. Perhaps employees who socialize with coworkers outside of work for instrumental reasons experience less resource gain and more resource drain, as well as greater feelings of dirtiness (Casciaro et al., 2014), ambivalence (Zipay et al., in press), and inauthenticity (Cha et al., 2019; Gabriel et al., 2020). Integrating nonwork self-disclosure and socializing motives with emerging research on networking motives (e.g., Wolff, Weikamp, & Batinic, 2018) and networking behaviors (Porter, Woo, & Campion, 2016; Wolff & Spurk, 2020) would be fruitful in this regard.

Another promising route for future research is to consider the depth of nonwork selfdisclosure. I focused on self-disclosure amount as a general first step in understanding the implications of disclosing personal matters to one's coworker. Future research should examine whether differential effects emerge for self-disclosure of low-depth topics, such as weekend plans or a recent vacation, and of higher-depth—and potentially stigmatized—topics, such as pregnancy¹⁴ (e.g., Jones, 2017), sexual orientation, or mental illness (e.g., Jones & King, 2014; Lynch & Rodell, 2018; see also Greene, Derlega, & Mathews, 2006). For example, revealing sensitive or stigmatized personal information to a coworker would likely signal trust and vulnerability (Baer, Matta, et al., 2018), elicit compassion from the coworker (Schabram & Heng,

¹⁴ An employee participant in the field study noted that her coworker was the first person she told when she found out she was pregnant.

in press), and increase authenticity and bonds with coworkers (Cha et al., 2019; Lynch & Rodell, 2018), yet could also disrupt relational trajectories (Gibson, 2018). Concealing such stigmatized information may be stressful (Pachankis, 2007) and weaken relationships with coworkers (Lynch & Rodell, 2018). In addition, concealing (versus disclosing) positive personal information from coworkers may also entail unique well-being and social implications (Roberts, Levine, & Sezer, 2020). Relatedly, the valence of nonwork self-disclosure to coworkers may matter, for example, whether one is disclosing negative personal information, such as through venting (Rosen, Gabriel, Lee, Koopman, & Johnson, 2021), or disclosing positive personal information, such as through capitalization (i.e., sharing good news, Watkins, in press).

Future research should simultaneously explore nonwork self-disclosure valence and depth to more clearly illuminate what type(s) of self-disclosure are most influential in developing and maintaining coworker friendships. Such an endeavor could build from my supplemental dyadic findings to examine the implications of different nonwork self-disclosure types for both the discloser and listener using an actor-partner interdependence modeling approach. This may reveal differential benefits and burdens for the discloser and listener (e.g., perhaps improved well-being for the discloser but decreased well-being for the listener, and increased relationship closeness for both parties). Another promising opportunity in terms of the discloser-listener dyad is to examine the moderating role of the listener's response to the nonwork self-disclosure (i.e., responsiveness, Gable, Reis, Impett, & Asher, 2004; Greene et al., 2006). That is, whether the listener demonstrates positive interest in the nonwork disclosure (e.g., asks follow-up questions about one's personal life), is combative in their responses or disinterested, should influence the effects of nonwork selfdisclosure for the discloser (Gable & Reis, 2010), in terms of resource gain and drain (e.g., constructive responsiveness would be expected to amplify the effects of self-disclosure on increased WPE and decreased WPC).

With regard to nonwork socializing, future research should expand from my findings to investigate the impact of socializing context on coworker friendship development and maintenance. In my field study sample, nearly 90% of participants reported their work group had organized or hosted a social event recently, and this was positively and moderately correlated with nonwork socializing with one's coworker, but not significantly correlated with nonwork self-disclosure or whether the coworker was considered to be a friend. Perhaps participating in social events organized by one's work group allows coworkers to personally get to know one another, and as their friendship develops, their socializing begins to extend beyond work events. I suggest future research use auto-regressive cross-lagged longitudinal designs (Selig & Little, 2012) to more fully understand the role of social events hosted or organized by the organization versus socializing between coworkers that occurs more organically and spontaneously. Such an endeavor could also help pinpoint which types of work group social events would accelerate friendship growth (e.g., lunches, happy hours, etc.).

The negative and marginally significant effects of nonwork socializing on WPE and vitality at work in the main model of the field study results are interesting and have several potential explanations that future research should test. The bivariate associations between nonwork socializing and WPE and vitality at work were not significant. Perhaps partialing out shared variance with nonwork self-disclosure and personal growth indicates that the unique variance due to socializing is tied to reductions in enrichment and vitality. Alternatively, virtual socializing could be associated with "Zoom fatigue" (e.g., Sander & Bauman, 2020) whereas face-to-face (including socially distant) socializing could be accompanied by anxiety about contracting Covid19 from one's coworker. As Covid-19 continues to shape the work environment and friendships, future research should examine the unique implications of face-to-face versus virtual socializing, and how the potentially harmful effects of virtual socializing can be minimized (e.g., how might coworkers who are members of remote teams be energized by socializing virtually). In addition, while I focused on friendship with a specific coworker, whether the socializing occurs one-on-one with a coworker versus with a group of coworkers may be important to consider. As an example, prior research suggests that extraversion is positively associated with multiplex network size (Malcolm, Saxton, McCarty, Roberts & Pollet, 2021; Methot et al., 2016), but not significantly associated with network density or closeness. Given this, perhaps people higher in extraversion benefit more from socializing with a group of coworkers, whereas those lower in extraversion benefit more from socializing one-on-one with a coworker.

I also suggest future research extend the CFR model and associated findings by investigating latent profiles (e.g., Bennett et al., 2016; Gabriel et al., 2020) of coworker relationship functions. To understand how the degree of overlap of work and friendship within a single relationship affects employees, I examined work-related features as moderators of the effects of friendship features, which were largely not supported. Instead, perhaps examining the patterns of work and friendship features would reveal insights. For example, some coworker relationships may be primarily personal-oriented (i.e., score higher on personal growth and friendship relationship functions and lower on work-related functions) whereas others may be more work-oriented (i.e., score higher on task assistance and career advancement and lower on personal relationship functions), others may be high on both work and personal, and others may be more support-based (i.e., score higher on emotional support and task assistance). Such coworker relationship patterns may hold unique implications for work performance, well-being, and relational outcomes. An extension of this idea is to examine dyadic latent profiles (Roberson, Lenger, Gray, Cordova, & Gordon, 2020; Whiteman & Loken, 2006) of coworker relationship functions to consider ways in which two coworkers may experience different functions (e.g., perhaps coworker A offers personal growth to coworker and B offers task assistance to A), and the implications this holds for each of their work, relationship, and personal lives.

Finally, future research should examine how daily and/or weekly fluctuations in nonwork self-disclosure and socializing with coworkers (i.e., friendship surface structure, which is expected to vary) influence resource gain and drain, as well as the individual differences that amplify gain and buffer drain. This would be examined using experience sampling methodology (ESM) (Gabriel et al., 2019; McCormick, Reeves, Downes, Li, & Ilies, 2020). As I explain in Appendix F, ESM was the originally planned methodology for the field study before I pivoted to a different design due to Covid-19. Fortunately, my theorized CFR model and original proposed methods set much of the groundwork for designing and conducting an ESM study of coworker friendship in the future. This could be extended further by conducting a daily experimental intervention study (e.g., Foulk, Lanaj, Tu, Erez, & Archambeaux, 2018; Lanaj, Foulk, & Erez, 2019; Song, Liu, Wang, & Lanaj, 2018), in which participants could be randomly assigned each morning to self-disclose to their coworker that day high or low depth personal information or positive or negative personal information, for example.

Conclusion

What distinguishes coworker friendships from other work and personal relationships is that instrumental (i.e., work-related) and friendship features overlap within a single relationship. Given this, I integrated fragmented literatures on coworker relationships, friendship, and coworker friendships to identify three features of friendship in coworker relationships: personal growth relationship function, nonwork self-disclosure with a coworker, and nonwork socializing with a coworker. Drawing on the notion from interaction ritual theory that social interactions indicate types of social bonds (e.g., work- and/or friendship-based) and affect resource gain and drain (Collins, 2004), I examined effects of the three friendship features across a vignette experiment and two-wave field study. Collectively, the results revealed distinct effects of the three friendship features for employees at work (e.g., in regard to helping behaviors) and outside of work (e.g., in regard to well-being). These novel findings have critical implications that can help employees navigate friendship with coworkers. It is my sincere hope that future research continues to examine how manifestations of friendship in coworker relationships affect employees, work groups, and organizations.

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Figure 1: Coworker Friendship-Resource (CFR) Model

APPENDIX A. HYPOTHESES AND RESULTS SUMMARY

Hypothesis	Results of Study 1:	Results of Study 2:
	Vignette Experiment	Field Study
Hypothesis 1 : The <i>nonwork relationship function of personal growth</i> will be positively related to resource gain [i.e., (a) work-personal enrichment, (b) vitality, and (c) psychological detachment from work] and drain [i.e., (d) work-personal conflict, and (e) intrusion].	 (a) supported (for WPE and PWE) (b) supported (c) not supported (not significant) (d) not supported (significant but in opposite direction than predicted, for WPC and PWC) (e) not supported (not significant) 	 (a) supported (for WPE and PWE) (b) supported (c) not supported (not significant) (d) not supported (not significant) (e) not supported (marginally significant but in opposite direction than predicted)
Hypothesis 2 : <i>Nonwork self-disclosure with coworker</i> will be positively related to resource gain [i.e., (a) work-personal enrichment, (b) vitality, and (c) psychological detachment from work] and drain [i.e., (d) work-personal conflict, and (e) intrusion].	 (a) supported (for WPE and PWE) (b) supported (c) not supported (not significant) (d) not supported (not significant) (e) not supported (not significant) 	 (a) supported (b) not supported (not significant) (c) not supported (not significant) (d) not supported (significant but in opposite direction than predicted, for WPC) (e) not supported (significant but in opposite direction than predicted)
Hypothesis 3 : <i>Nonwork socializing with coworker</i> will be positively related to resource gain [i.e., (a) work-personal enrichment, (b) vitality, and (c) psychological detachment from work] and drain [i.e., (d) work-personal conflict and (e) intrusion].	 (a) supported (for WPE and PWE) (b) supported (c) not supported (significant but in opposite direction than predicted) (d) not supported (not significant) (e) not supported (not significant) 	 (a) not supported (marginally significant but in opposite direction than predicted) (b) not supported (marginally significant but in opposite direction than predicted) (c) not supported (not significant) (d) supported (for WPC) (e) not supported (significant but in opposite direction than predicted)

Table 9: Hypotheses and Results Summary

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Hypothesis	Results of Study 1: Vignette Experiment	Results of Study 2: Field Study
Hypothesis 4 : The work-related relationship function of career advancement will moderate the positive relationships between the <i>nonwork relationship function of personal growth</i> and resource gain [i.e., (a) work-personal enrichment, (b) vitality] and resource drain [i.e., (c) work-personal conflict, and (d) intrusion], such that these relationships will be stronger when the career advancement function is higher rather than lower. The career advancement function will moderate the positive relationship between personal growth function and (e) psychological detachment, such that this relationship will be weaker when the career advancement function is higher rather than lower.	 (a) not supported (not significant) (b) not supported (not significant) (c) not supported (not significant) (d) not supported (not significant) (e) not supported (not significant) 	 (a) not supported (not significant) (b) not supported (not significant) (c) not supported (not significant) (d) not supported (not significant) (e) not supported (not significant)
Hypothesis 5 : Work-related information sharing will moderate the positive relationships between <i>nonwork self-disclosure with coworker</i> and resource gain [i.e., (a) work-personal enrichment, (b) vitality] and resource drain [i.e., (c) work-personal conflict, and (d) intrusion], such that these relationships will be stronger when work-related information sharing is higher rather than lower. Work-related information sharing will moderate the positive relationship between nonwork self-disclosure with coworker and (e) psychological detachment, such that this relationship will be weaker when work-related information sharing is higher rather than lower.	 (a) not supported (not significant) (b) not supported (not significant) (c) not supported (significant interaction but not in predicted form) (d) not supported (significant interaction but not in predicted form) (e) not supported (not significant) 	 (a) not supported (not significant) (b) not supported (not significant) (c) not supported (not significant) (d) not supported (not significant) (e) not supported (not significant)
Hypothesis 6 : Task interdependence will moderate the positive relationships between <i>nonwork socializing with coworker</i> and resource gain [i.e., (a) work-personal enrichment, (b) vitality] and resource drain, [i.e., (c) work-personal conflict, and (d) intrusion], such that these relationships will be stronger when task interdependence is higher rather than lower. Task interdependence will moderate the positive relationship between nonwork socializing with coworker and (e) psychological detachment, such that this relationship will be weaker when task interdependence is higher rather than lower.	 (a) not supported (not significant) (b) not supported (not significant) (c) not supported (not significant) (d) not supported (not significant) (e) not supported (not significant) 	 (a) not supported (not significant) (b) not supported (not significant) (c) not supported (not significant) (d) not supported (not significant) (e) not supported (not significant)
Hypothesis 7: Work-nonwork segmentation preferences will moderate the relationships between <i>nonwork self-disclosure with coworker</i> and work-nonwork enrichment and conflict as well as with detachment such	 (a) not supported (not significant) (b) not supported (not significant) (c) not supported (not significant) 	(a) not supported (not significant)(b) not supported (not significant)(c) not supported (not significant)

Hypothesis	Results of Study 1: Vignotte Experiment	Results of Study 2: Field Study
that (a) the positive relationship between nonwork self-disclosure with coworker and work-personal enrichment will be stronger, (b) the positive relationship between nonwork self-disclosure with coworker and detachment will be stronger, and (c) the positive relationship between nonwork self-disclosure with coworker and work-personal conflict will be weaker, when a preference for work-nonwork integration is higher rather than lower.	Vignette Experiment	
Hypothesis 8 : Work-nonwork segmentation preferences will moderate the relationships between <i>nonwork socializing with coworker</i> and enrichment and conflict as well as with detachment such that, (a) the positive relationship between nonwork socializing with coworker and work-personal enrichment will be stronger, (b) the positive relationship between nonwork socializing with coworker and detachment will be stronger, and (c) the positive relationship between nonwork socializing with coworker and work-personal conflict will be weaker, when a preference for work-nonwork integration is higher rather than lower.	 (a) not supported (not significant) (b) not supported (not significant) (c) not supported (not significant) 	 (a) not supported (not significant) (b) not supported (not significant) (c) not supported (not significant)
Hypothesis 9 : Paradox mindset will moderate the relationships between <i>nonwork self-disclosure with coworker</i> and resource gain and drain, such that (a) the positive relationship between nonwork self-disclosure with coworker and vitality at work will be stronger and (b) the positive relationship between nonwork self-disclosure with coworker and intrusion will be weaker, when paradox mindset is higher rather than lower.	(a) supported(b) supported	(a) supported(b) not supported (significant interaction but not in predicted form)
Hypothesis 10 : Paradox mindset will moderate the relationships between <i>nonwork socializing with coworker</i> and resource gain and drain, such that (a) the positive relationship between nonwork socializing with coworker and vitality at work will be stronger and (b) the positive relationship between nonwork socializing with coworker and intrusion will be weaker, when paradox mindset is higher rather than lower.	(a) not supported (not significant)(b) not supported (not significant)	(a) not supported (not significant)(b) not supported (not significant)
Hypothesis 11 : Work-personal enrichment will mediate the relationships between <i>nonwork self-disclosure with coworker</i> and (a) helping behaviors, (b) adaptive performance, and (c) life satisfaction.	(a) tested in supplemental analyses and supported (for WPE and PWE)	(a) supported(b) not supported (not significant)(c) supported

Hypothesis	Results of Study 1: Vignette Experiment	Results of Study 2: Field Study
	(b) not tested (c) not tested	
Hypothesis 12: Work-personal enrichment will mediate the relationships between <i>nonwork socializing with coworker</i> and (a) helping behaviors, (b) adaptive performance, and (c) life satisfaction.	 (a) tested in supplemental analyses and supported (for WPE and PWE) (b) not tested (c) not tested 	(a) not supported (not significant)(b) not supported (not significant)(c) not supported (not significant)
Hypothesis 13: Vitality will mediate the relationships between <i>nonwork self-disclosure with coworker</i> and (a) helping behaviors, (b) adaptive performance, and (c) life satisfaction.	 (a) tested in supplemental analyses and supported (b) not tested (c) not tested 	(a) not supported (not significant)(b) not supported (not significant)(c) not supported (not significant)
Hypothesis 14 : Vitality will mediate the relationships between <i>nonwork socializing with coworker</i> and (a) helping behaviors, (b) adaptive performance, and (c) life satisfaction.	 (a) tested in supplemental analyses and supported (b) not tested (c) not tested 	(a) not supported (not significant)(b) not supported (not significant)(c) not supported (not significant)
Hypothesis 15 : Psychological detachment from work will mediate the relationships between <i>nonwork socializing with coworker</i> and (a) life satisfaction and (b) relationship conflict with coworker.	Not tested	(a) not supported (not significant)(b) not supported (not significant)
Hypothesis 16 : Work-personal conflict will mediate the relationships between <i>nonwork self-disclosure with coworker</i> and (a) unethical behaviors and (b) relationship conflict with coworker.	Not tested	 (a) not supported (not significant) (b) not supported (marginally significant but in opposite direction than predicted)
Hypothesis 17 : Work-personal conflict will mediate the relationships between <i>nonwork socializing with coworker</i> and (a) unethical behavior, and (b) relationship conflict with coworker.	Not tested	(a) not supported (not significant)(b) supported
Hypothesis 18: Intrusion will mediate the relationships between <i>nonwork self-disclosure with coworker</i> and (a) unethical behavior and (b) relationship conflict with coworker.	Not tested	(a) not supported (not significant)(b) not supported (not significant)

APPENDIX B. DEFINITIONS OF MODEL CONSTRUCTS

Model Construct	Construct Definition	Role in Model	Other Notes
Nonwork	An individual at work "helped	Independent Variable	This construct captures
relationship	me grow and develop as a	(Friendship/affective,	deep structure, which
function of	human being" (Colbert, Bono,	i.e., nonwork feature)	refers to the "essence"
personal growth	& Purvanova, 2016, p. 1203)		of friendships (i.e., what
			friends are) (Hartup &
			Stevens, 1997, p. 355).
Nonwork self-	"sharing of information about	Independent Variable	These constructs tap
disclosure with	their activities and concerns"	(Friendship/affective,	surface structure, which
coworker	regarding their personal life	i.e., nonwork feature)	refers to specific social
	(Nifadkar, Wu, & Gu, 2019, p.		interactions in
NT 1	242)	T 1 1 (T7 11	friendships "that
Nonwork	Spending time with one's	Independent Variable	characterize them at any
socializing with	coworker outside of work in a	(Friendship/affective,	given moment or in any
coworker	leisure setting	i.e., nonwork feature)	given situation (i.e.,
			(Hartup & Stayons
			(11a) (11
Work-related	An individual at work "helped	Moderator	1))/, p. 555).
relationship	me to advance my career by	Wiodefator	
function of <i>career</i>	providing advice or access to		
advancement	contacts and other career-		
	related resources" (Colbert.		
	Bono, & Purvanova, 2016, p.		
	1203)		
Work-related	Exchanging information that is	Moderator	
information-	related to work tasks (Mesmer-		Instrumental/Work-
sharing	Magnus & DeChurch, 2009)		Related Moderator
Task	Coworkers "are task	Moderator	
interdependence	interdependent when they must		
	share materials, information, or		
	expertise in order to achieve		
	the desired performance or		
	output" (Van der Vegt, Emans,		
Work nonwork	& van de vilert, 2001, p. 52)	Madamatan	
work-nonwork	work and home domains as	Moderator	
preferences	'preferences' for work home		
preferences	segmentation and that		
	segmentation is the opposite of		
	integration" (Kreiner, 2006 n		Individual Differences
	486)		Moderator
Paradox mindset	"individuals who have a	Moderator	
	paradox mindset tend to value,		
	accept, and feel comfortable		
	with tensions. These		

Table 10: Definitions of Model Constructs

Model Construct	Construct Definition	Role in Model	Other Notes
	individuals see tensions as		
	opportunities [and] confront		
	them" (Miron-Spektor et al.,		
	2018, p. 27)		
Work-personal	"extent to which work	Mediator	Resource Gain: Work-
enrichment	enhances personal life and		nonwork
	personal life enhances work"		
	(Fisher, Bulger, & Smith,		
	2009, p. 443)		
Vitality at work	"sense of feeling energized and	Mediator	Resource Gain:
	alive" at work (Porath,		Affective
	Spreitzer, Gibson, & Garnett,		
	2012, p. 250)		
Psychological	"the subjective experience of	Mediator	Resource Gain:
detachment from	leaving work behind, to		Cognitive
work	"switch off," and to forget		
	about work during nonwork		
	time" (Sonnentag, Venz, &		
	Casper, 2017, p. 368)	26.4	
Work-personal	"work-to-personal conflict	Mediator	Resource Drain: Work-
conflict	(WPC) is defined as occurring		nonwork
	when the general demands of,		
	time devoted to, and strain		
	created by work interfere with		
	performing personal activities		
	and interests, whereas		
	personal-to-work conflict		
	(PWC) occurs when the time		
	and strain created by personal		
	interfere with work " (Wilson		
	& Baumann 2015 n 230)		
Democived intrusion	"Democived intrusiveness is	Madiatar	Recourse Drain:
Perceived intrusion	defined as the violation of	Mediator	Resource Dram.
	privacy porms rules and		Relational
	boundaries in relationships"		
	(Ebrhardt & Paging 2010 p		
	(Elimardi & Ragins, 2017, p.		
Helping behavior	"promotive behavior that	Downstream	Work Outcome
Theiping benavior	emphasizes small acts of	Dependent Variable	work outcome
	consideration Helping is	Dependent variable	
	cooperative behavior that is		
	noncontroversial. It is directly		
	and obviously affiliative: it		
	builds and preserves		
	relationships; and it		
	emphasizes interpersonal		
	harmony" (Van Dyne &		
	LePine, 1998, p. 109)		
Adaptive	"Individual task adaptivity	Downstream	Work Outcome
performance	reflects the degree to which	Dependent Variable	
-	individuals cope with, respond	· ·	

Model Construct	Construct Definition	Role in Model	Other Notes
	to, and/or support changes that affect their roles as individuals" (Griffin, Neal, & Parker, 2007, p. 331)		
Unethical behavior to help the coworker (i.e., unethical helping)	Behavior that is immoral and intended to benefit a coworker/teammate (vs. help oneself or help the organization (Umphress, Gardner, Stoverink, & Leavitt, 2020)	Downstream Dependent Variable	Work Outcome
Life satisfaction	Holistic judgment of one's current life, relative to an internal standard (Diener, Suh, Lucas, & Smith, 1999)	Downstream Dependent Variable	Well-Being/Personal Outcome
Relationship conflict with coworker	"Relationship conflicts exist when there are interpersonal incompatibilities among group members. This type of conflict often includes personality differences as well as differences of opinion and preferences regarding nontask issues" (Jehn & Bendersky, 2003, p. 200)	Downstream Dependent Variable	Relational Outcome

APPENDIX C. DATA COLLECTION SUMMARY

Model Variables	Study 1	Study 2	Study 2	Study 2
	(Vignette	(Field	(Field	(Field Study):
	Experiment)	Study):	Study):	Coworker
		Time 1	Time 2	Survey
Affective/Friendship Features	1 1		1	
Nonwork-related relationship	X*	Х		
function of personal growth				
Nonwork self-disclosure with	X*	Х		
coworker				
Nonwork socializing with	X*	Х		
coworker				
Moderators				
Instrumental/Work Features				
Work-related relationship	Х	Х		
function of career advancement				
Work-related information sharing	Х	Х		
Task interdependence	Х	Х		
Individual Differences				
Work-nonwork segmentation	Х	Х		
preferences				
Paradox mindset	Х	Х		
Resource Gain Mechanisms				
Work-personal enrichment	Х		Х	
Vitality at work	Х		Х	
Psychological detachment from	X		X	
work				
Resource Drain Mechanisms				
Work-personal conflict	Х		Х	
Perceived intrusion	Х		Х	
Work Outcomes				
Helping behavior	Х		Х	Х
Adaptive performance			Х	Х
Unethical behavior to help the	X		X	X
coworker				
Personal and Relational Outcomes				
Life satisfaction			X	
Relationship conflict with			X	
coworker				

Note. *Indicates manipulated.

APPENDIX D. MEASURES

Table 12: Study Measures

Participant Instructions: Unless instructed otherwise, please reference the specific coworker you agreed to refer to throughout this survey.

Scale Items	Reference and Scale Anchors
Nonwork activities with coworker (Study 1)	Adapted from Watson, Clark,
1. Go out for a meal with my coworker.**	McIntyre, and Hamaker (1992)
2. Go out for happy hour or a drink with my coworker.**	
3. Go to a coffee shop with my coworker. *	*Indicates added item.
4. Exercise or play a sport with my coworker.	**Indicates adapted item.
5. Go shopping with my coworker.	† Indicates item dropped from
6. Play a game with my coworker.	scale but collected as
7. Participate in a hobby with my coworker.	supplemental data.
8. Participate in a cultural activity (e.g., concert, play or	
museum) with my coworker. **	1 = never
9. Participate in a volunteering activity with my coworker.*	2 = once
10. Watch a TV show or movie with my coworker.	3 = twice
11. Go to my coworker's house or apartment.*	4 = 3 times,
12. Go to or give a party with my coworker.	5 = 4 or more times
13. Go on a trip with my coworker that was not directly related	
to work.	
14. Romantic activity with my coworker or dating. †	
15. Studying with my coworker. †	
16. Having a serious discussion with my coworker. †	
17. Running errands with my coworker. †	
Nonwork socializing with coworker	Developed for this study based
1. Spend non-required time with my coworker outside of	on how socializing with
	coworkers is described in the
2. Socialize with my coworker beyond the workplace.	literature (Colbert et al., 2016;
3. Fining out with my coworker in a nonwork setting.	La grame & Zou, 2008, Town of
4. Get together with my coworker after work.	$a_1 = 2014$
5. Interact with my coworker on nonwork days (e.g.,	al., 2014)
weekend).	1 = never
	$3 = \alpha c c a signally$
	5 = frequently
	5 nequently
Nonwork self-disclosure with coworker scale #1	Adapted from Nifadkar, Wu,
1. I keep my coworker informed about important changes in	and Gu (2019) to replace
my personal life.	"family" with "personal,"
2. I share personal matters with my coworker.	reference the coworker instead
3. I inform my coworker how I deal with my personal-related	of the supervisor, and assess
issues.	self (vs. other) ratings.
4. I inform my coworker about problems in my personal life.	
5. I share my future personal plans with my coworker.	1 = strongly agree

Scale Items	Reference and Scale Anchors
 I keep my coworker informed about important events in my personal life. 	2 = agree 3 = neither agree nor disagree 4 = agree 5 = strongly agree
Nonwork self-disclosure with coworker scale #2	Adapted from Baer, Matta,
 I share my personal feelings with my coworker. I confide in my coworker about personal issues that are affecting me. I discuss with my coworker how I honestly feel, even negative feelings and frustration. I discuss with my coworker problems or difficulties that could potentially be used to disadvantage me. I share my personal beliefs with my coworker. 	Kim, Welsh, and Garud (2018) to reference personal (instead of work-related) self-disclosures 1 = strongly agree 2 = agree 3 = neither agree nor disagree 4 = agree 5 = strongly agree
Demond anowith relationship function	Calbert Dana and Durganava
Personal growth relationship function 1. My coworker helps me grow and develop as a human being.	(2016)
 My coworker pushes me to become a better person. My coworker helps me develop life skills and competencies, such as becoming a better listener, or being more patient, or solving problems better. 	 1 = strongly disagree 2 = disagree 3 = neither agree nor disagree 4 = agree 5 = strongly agree
 <u>Career advancement relationship function</u> 1. My coworker discusses my career plans with me. 2. My coworker gives me opportunities to build my career. 3. My coworker helps me identify opportunities for development that will advance my career. 	Colbert, Bono, and Purvanova (2016) 1 = strongly disagree 2 = disagree 3 = neither agree nor disagree 4 = agree 5 = strongly agree
 <u>Work-related information sharing</u> My coworker and I freely share information used to make key work decisions. My coworker and I work hard to keep one another up to date on our work activities. My coworker and I keep each other "in the loop" about key issues affecting our work. 	Adapted from Bunderson and Sutcliffe (2002) to reference the focal coworker specifically. 1 = strongly disagree 2 = disagree 3 = neither agree nor disagree 4 = agree 5 = strongly agree
Task interdependence1. I work closely with my coworker in doing my work.2. I frequently must coordinate my efforts with my coworker.3. My own performance is dependent on receiving accurate information from my coworker.	Pearce and Gregersen (1991) with adaptation from Sin, Nahrgang, and Morgeson (2009)

Scale Items	Reference and Scale Anchors
 My work requires me to consult with my coworker fairly frequently. 	 1 = strongly disagree 2 = disagree 3 = neither agree nor disagree 4 = agree 5 = strongly agree
Work-nonwork segmentation preferences	Kreiner (2006)
 I don't like to have to think about work when I'm not working. I prefer to keep work life at work. I don't like work issues creeping into my personal life. I like to be able to leave work behind when I am not working. 	 1 = strongly disagree 2 = disagree 3 = neither agree nor disagree 4 = agree 5 = strongly agree
Paradox mindset	Miron-Spektor, Ingram, Keller,
1. When I consider conflicting perspectives, I gain a better understanding of an issue.	Smith & Lewis (2018)
2. I am comfortable dealing with conflicting demands at the same time.	1 = strongly disagree 2 = disagree
3. Accepting contradictions is essential for my success.	3 = neither agree nor disagree
4. Tension between ideas energizes me.	4 = agree
5. I enjoy it when I manage to pursue contradictory goals.	5 = strongly agree
6. I often experience myself as simultaneously embracing conflicting demands.	
7. I am comfortable working on tasks that contradict one another.	
8. I feel uplifted when I realize that two opposites can be true.	
9. I feel energized when I manage to address contradictory issues.	
Work-nonwork enrichment	Adapted from Kacmar,
Work-to-personal enrichment	Crawford, Carlson, Ferguson,
1. My work helps me to understand different viewpoints and	and Whitten (2014) to replace
this helps me be a better person.	"family member" with "person"
2. My work makes me feel happy and this helps me be a	and replace "family" with
better person.	"personal life"
3. My work helps me feel personally fulfilled and this helps	
me be a better person.	l = strongly disagree
Demonstration of the sector	2 = disagree
1 My personal life helps me acquire skills and this helps me	3 - neutrer agree nor disagree
1. My personal me nerps me acquire skins and uns nerps me	4 - agree 5 - strongly agree
2 My personal life puts me in a good mood and this helps me	5 – Subligiy agree
be a better worker	
3. My personal life encourages me to use my work time in a	
focused manner and this helps me be a better worker.	
Thriving at work: Vitality dimension	Porath, Spreitzer, Gibson, and
When I am working	Garnett (2012)

Scale Items		Reference and Scale Anchors
1.	I feel alive and vital.	
2.	I have energy and spirit.	1 = strongly disagree
3.	I do not feel very energetic. (R)	2 = disagree
4.	I feel alert and awake.	3 = neither agree nor disagree
5.	I look forward to each new day.	4 = agree
		5 = strongly agree
Psycholo	ogical detachment from work	Sonnentag and Fritz (2007)
When I a	am NOT working	
1.	I forget about work.	1 = strongly disagree
2.	I do not think about work at all.	2 = disagree
3.	I distance myself from my work.	3 = neither agree nor disagree
4.	I get a break from the demands of work.	4 = agree
		5 = strongly agree
Work-pe	ersonal conflict	Wilson and Baumann (2015)
Work-to-	-personal conflict	``````````````````````````````````````
1. 7	The demands of my work interfere with my personal	Please select the answer the
	activities.	best represents your agreement
2.	My job produces strain that makes it difficult to fulfill	with each item.
1	personal interests.	1 = strongly disagree
3.	When I am done working for the day I am often too	2 = disagree
	exhausted to participate in personal activities.	3 = neither agree nor disagree
4	My work takes up time that I'd like to spend on personal	4 = agree
	activities	5 = strongly agree
5	Responsibilities at work often prevent me from	5 strongry ugree
5.	narticipating in personal activities	
	puricipating in personal activities.	
Persona	l-to-work conflict	
1.	I miss work activities due to the amount of time I spend on	
1	personal activities.	
2.	My personal activities produce stress that makes it difficult	
1	to concentrate at work.	
3.	My personal activities drain me of energy I need to do my	
	iob.	
4.	I am often too tired to be effective at work because of my	
	involvement in personal activities.	
5	My personal interests prevent me from completing work	
1	responsibilities	
-		
Perceive	d intrusion	Adapted from Ehrhardt and
1. 1	I feel that my coworker intrudes too much into my personal	Ragins (2019) to reference the
1	life.	focal coworker vs. "others at
2.	I feel like my personal life is invaded by my coworker.	work"
3	My coworker does not respect my need for a private	-
	personal life.	1 = strongly disagree
4	My coworker tries to pry into my personal life too much	2 = disagree
		3 = neither agree nor disagree
		4 = agree

Scale Items	Reference and Scale Anchors
	5 = strongly agree
 <u>Helping behaviors (Study 2, coworker-rated)</u> 1. Volunteers to do things to help out. 2. Cooperatively works with others. 3. Spends time helping others with their work tasks because they want to. 4. Helps others outside of their work group. 	Glomb, Bhave, Miner & Wall (2011), subset of four items used by Gabriel, Koopman, Rosen & Johnson (2018) My coworker 1 = strongly disagree 2 = disagree 3 = neither agree nor disagree 4 = agree 5 = strongly agree
 <u>Adaptive performance: Individual task adaptivity (Study 2, coworker-rated)</u> 1. Adapts well to changes in their core tasks. 2. Copes with changes to the way they have to do their core tasks. 3. Learns new skills to help them adapt to changes in their core tasks. 	Griffin, Neal & Parker (2007) My coworker 1 = strongly disagree 2 = disagree 3 = neither agree nor disagree 4 = agree 5 = strongly agree
 <u>Unethical behavior to help the coworker (Study 2, coworker-rated)</u> 1. My coworker has concealed information from others that could be damaging to me. 2. To benefit me, my coworker has not revealed to others a mistake that they made that would damage my reputation. 3. To benefit me, my coworker has withheld negative information about my performance from others. 	Umphress, Gardner, Stoverink, and Leavitt (2020) 1 = strongly disagree 2 = disagree 3 = neither agree nor disagree 4 = agree 5 = strongly agree
Life satisfaction 1. In most ways my life is close to my ideal. 2. The conditions of my life are excellent. 3. I am satisfied with my life. 4. I have gotten the important things I want in life. 5. If I could live my life over, I would change almost nothing.	Diener, Emmons, Larsen & Griffin (1985) 1 = strongly disagree 2 = disagree 3 = neither agree nor disagree 4 = agree 5 = strongly agree
Relationship conflict 1. How much emotional conflict is there between you and your coworker? 2. How much tension is there between you and your coworker? 3. How much friction is there between you and your coworker?	Jehn (1995) 1 = None 3 = A moderate amount 5 = A lot

Table 13: Supplemental Measures

Scale Items	Reference and Scale Anchors
Demographics (Study 1 and Study 2)	
Age, gender, ethnicity, educational level, marital status, number of	
children currently living with participant	
Job Attributes (Study 2)	
Job title and job description, does the work group or organization	
offer social events to help get to know coworkers (e.g., lunches and	
happy hours, ice breakers, team outings or retreats/trips, either	
formally or informally and virtually or face-to-face)	
<u>Social Attributes (Study 2)</u> Tenure of working relationship with focal coworker, focal	
coworker's demographics (gender and ethnicity, in order to assess	
demographic similarity), if they consider the focal coworker to be	
their friend (i.e., scale mean for 3 or higher on the general	
friendship measure from Colbert et al. (2016), how long have they	
been friends and were they friends before they started working	
meet) number of friends in the organization (assessed with item:	
How many friends do you have in your current work organization?	
These individuals include anyone with whom you socialize outside	
of work, discuss personal topics, as well as work with or rely on for	
information or advice in your organization.)	
Covid-19-Related Attributes	
% of work done remotely prior to Covid-19 precautions and	
currently; frequency and medium of communication with coworker	
prior to Covid-19 precautions and currently; household size	
Other relationship functions (Study 2)	Colbert, Bono, and Purvanova
Giving to others	(2016)
someone else	1 = strongly disagree
2. This relationship gives me the opportunity to mentor and	2 = disagree
support another person.	3 = neither agree nor disagree
3. This relationship gives me the opportunity to give	4 = agree
something back.	5 = strongly agree
Emotional support	
1. My coworker helps me cope with stress.	
2. My coworker allows me to vent my frustrations.	
3. My coworker helps me release tension.	
Friendshin	
1. My coworker is my friend.	
2. I spend time with my coworker outside of work.	

Scale Items	Reference and Scale Anchors
3. My relationship with my coworker is more than just a work relationship.	
Task assistance	
1. My coworker helps me get my work done.	
2. My coworker answers questions I have about my job.	
3. My coworker is always willing to give me a hand with my	
work.	
Emotional support (Study 2)	Colbert Bono and Purvanova
1. My coworker helps me cope with stress	(2016)
2. My coworker allows me to vent my frustrations.	(2010)
3. My coworker helps me release tension.	1 = strongly disagree
	2 = disagree
	3 = neither agree nor disagree
	4 = agree
	5 = strongly agree
Support supplied by coworker (Study 2)	Adapted from Ehrhardt and
Instrumental support	Ragins (2019) to reference
1. Help you solve job-related problems?	focal coworker (vs. others at
2. Offer you advice that helps you do your job?	work)
3. Help you understand why things happen the way they do at	
Work? 4 Help you make sense out of workplace events?	Does your coworker
4. Help you make sense out of workplace events?	1 = strongly disagree
Personal support	2 = disagree
1. Provide you with support on personal matters?	3 = neither agree nor disagree
2. Offer you help on personal issues or challenges?	4 = agree
3. Offer to listen to a problem you may be having?	5 = strongly agree
4. Go out of their way to help you with personal issues?	
Perceived proximity (Study 2)	Boyer O'Leary, Wilson, and
1. Even when we are not working in the same place, I still feel	Metiu (2014) (use subset of
close to my coworker.	items that directly refer to
2. Physical distance doesn't matter in my relationship with	distance)
my coworker. When I think of my coworker the distance between the two	1 = strongly disagree
of us generally seems small	2 - uisagice 3 = neither agree nor disagree
4. I feel closer to my coworker than the actual physical	4 = agree
distance would suggest.	5 = strongly agree
5. Even when we haven't been in the same place, it hasn't	
seemed like I was far from my coworker.	
Coworker exchange (CWX) (Study 2)	Graen and Uhl-Bien (1995).
1. I know where I stand with my coworker.	using subset of 6 items from
2. My coworker understands my job problems and needs.	Sherony and Green (2002) and
	adaptations from Matta, Scott,
	Koopman, and Conlon (2015)

Scale Items	Reference and Scale Anchors
 My coworker would use his/her power to help me solve work problems, regardless of how much power is built into his/her position. My coworker would "bail me out" at his/her expense. I have enough confidence in my coworker that I would defend and justify his/her decision if he/she were not present to do so. I would characterize my working relationship with my coworker as extremely effective. 	1 = strongly disagree 2 = disagree 3 = neither agree nor disagree 4 = agree 5 = strongly agree
 Felt accountability (Study 2) 1. I am held very accountable for my actions at work by my coworker. 2. I often have to explain to my coworker why I do certain things at work. 3. My coworker closely scrutinizes my efforts at work. 4. My coworker holds me accountable for my decisions at work. 	Hall, Frink, Ferris, Hochwarter, Kacmar, and Bowen (2003), see also Hall, Royle, Brymer, Perrewé, Ferris, and Hochwarter (2006) 1 = strongly disagree 2 = disagree 3 = neither agree nor disagree 4 = agree 5 = strongly agree Uses subset of items that have a general referent or refer to the coworker (vs. items that refer to top management) and adapted to refer to "my coworker." Original scale is 8 items.
Affect (Study 2) Positive affect Interested, excited, strong, enthusiastic, proud, alert, inspired, determined, attentive, active Negative affect Distressed, upset, guilty, scared, hostile, irritable, ashamed, nervous, jittery, afraid	Watson, Clark, and Tellegen (1988) Please indicate to what extent you generally feel this way. 1 = very slightly or not at all 2 = slightly 3 = moderately 4 = mostly 5 = extremely
 <u>Relational energy (Study 2)</u> 1. I feel invigorated when I interacted with this coworker. 2. After interacting with this coworker, I feel more energy to do my work. 3. I feel increased vitality when I interact with this coworker. 4. I go to this coworker when I need to be "pepped up." 5. After an exchange with this coworker I felt more stamina to do my work. 	Owens, Baker, Sumpter, and Cameron (2016) 1 = strongly disagree 2 = disagree 3 = neither agree nor disagree 4 = agree 5 = strongly agree

Scale Items	Reference and Scale Anchors	
Thriving in personal life: Vitality dimension (Study 2)	Porath, Spreitzer, Gibson, and	
In my personal life	Garnett (2012) adapted stem "at	
1. I feel alive and vital.	work" to "in my personal	
2. I have energy and spirit	life"	
3 I do not feel very energetic (R)		
A I feel alert and awake	1 = strongly disagree	
5. Llook forward to each new day	2 - disagree	
5. I look loi ward to each new day.	2 = uisagree 2 = noither agree per disagree	
	3 = neruler agree nor disagree	
	4 - agree	
	5 = strongly agree	
Thriving at work: Learning dimension (Study 2)	Porath Spreitzer Gibson and	
At work	Garnett (2012)	
1 I find myzalf looming often	Gamen (2012)	
1. I find myself learning often.	1 stars had been a	
2. I continue to learn more as time goes by.	1 = strongly disagree	
3. I see myself continually improving.	2 = disagree	
4. I am NOT learning (R).	3 = neither agree nor disagree	
5. I am developing a lot as a person.	4 = agree	
	5 = strongly agree	
<u>Inriving in personal life: Learning dimension (Study 2)</u>	Porath, Spreitzer, Gibson, and	
In my personal life	Garnett (2012)	
1. I found myself learning often.		
2. I continued to learn more as time goes by.	1 = strongly disagree	
3. I saw myself continually improving.	2 = disagree	
4. I was not learning (R).	3 = neither agree nor disagree	
5. I was developing a lot as a person.	4 = agree	
	5 = strongly agree	
State of recovery (Study 2)	Sonnentag (2003)	
1. Because of the leisure activities I pursue, I feel recovered.		
2. Because of the leisure activities I pursue, I feel relaxed.	1 = strongly disagree	
3. Because of the leisure activities I pursue, I am in a good	2 = disagree	
mood.	3 = neither agree nor disagree	
	4 = agree	
	5 = strongly agree	
Dual role tension (Study 2)	Bridge and Baxter (1992)	
1. The friendship half and the work half of our relationship		
interfere with each other, creating problems for us.	1 = strongly disagree	
2. Our relationship would be a lot easier if we were only	2 = disagree	
friends or only work associates instead of being both.	3 = neither agree nor disagree	
3. Our work relationship and our friendship are often in	4 = agree	
conflict with one another.	5 = strongly agree	
4. Problems arose because our friendship and our work		
relationship were so much a part of each other. (R)		
5. It required extra effort to maintain both the friendship side		
and the work side of our relationship.		

Scale Items	Reference and Scale Anchors
6. We lowered our expectations about what we expect as both friend and coworker in order to maintain our relationship.	
Job engagement (vigor dimension) (Study 2)	Schaufeli, Bakker & Salanova
 Job engagement (vigor dimension) (Study 2) When I am working, I feel bursting with energy. When I am working, I feel strong and vigorous. When I got up in the morning, I felt like going to work. I can continue working for very long periods at a time. When I am working, I am very resilient, mentally. When I am working, I always persevere, even when things do not go well. Adaptive performance: Team member adaptivity (Study 2) I deal effectively with changes affecting my work unit (e.g., new team members). I learn new skills or take on new roles to cope with changes in the way my unit works. 	Schaufeli, Bakker & Salanova (2006) 1 = never 2 = rarely 3 = sometimes 4 = often 5 = always Griffin, Neal & Parker (2007) 1 = strongly disagree 2 = disagree 3 = neither agree nor disagree
3. I respond constructively to changes in the way my team works.	4 = agree 5 = strongly agree
Task conflict (Study 2) 1. How frequently are there conflicts about ideas between you and your coworker?	Jehn (1995) 1 = None
 How much conflict about the work you do is there between you and your coworker? To what extent are there differences of opinion between you and your coworker? 	3 = A moderate amount 5 = A lot
Emotional exhaustion (Study 2)	Wharton (1993), subset of three
1. I feel emotionally drained. 2. I feel used up. 3. I feel burned out.	 items used by Bennett, Gabriel, Calderwood, Dahling & Trougakos (2016) and Gabriel, Koopman, Rosen & Johnson (2018) 1 = strongly disagree 2 = disagree 3 = neither agree nor disagree 4 = agree 5 = strongly agree
Stress (Study 2)	Motowidlo, Packard, &
1. I feel a great deal of stress.	Manning (1986)
2. My life is extremely stressful.	
 3. Very FEW stressful things happen to me. (R) 4. I almost NEVER feel stressed. (R) 	1 = strongly disagree2 = disagree3 = neither agree nor disagree4 = agree5 = strongly agree

Scale Items	Reference and Scale Anchors
Talking about Covid-19 with coworker (Study 2) 1. I talk with my coworker about Covid-19. 2. I share stories with my coworker about Covid-19. 3. I chat with my coworker when I hear news about Covid-19. 4. I communicate with my coworker about Covid-19. 5. I give my coworker examples of Covid-19 news. Ambivalence about work situation (Study 2) 1. Conflicted 2. Uncertain 3. Unsettlad	Adapted from Baer, Rodell, et al. (2018) measure of unfairness talk 1 = To a very small extent 3 = To a moderate extent 5 = To a very large extent Adapted from Zipay, Mitchell, Baer, Sessions, and Bies (in press)
5. Onsetted	1 = Not at all 3 = Moderately 5 = Extremely
 Job insecurity (Study 2) 1. I am worried about the possibility of losing my job. 2. I am NOT worried about my job's future. (R) 3. I am certain I will keep my job for a long time. (R) 	Mauno, Leskinen, and Kinnunen (2001) 1 = strongly disagree 2 = disagree 3 = neither agree nor disagree 4 = agree 5 = strongly agree
 <u>Adaptive performance: Team member adaptivity dimension</u> (<u>Study 2, coworker-rated</u>) 1. Deals effectively with changes affecting their work unit (e.g., new team members). 2. Learns new skills or took on new roles to cope with changes in the way their unit works. 3. Responds constructively to changes in the way their team works. 	Griffin, Neal & Parker (2007) My coworker 1 = strongly disagree 2 = disagree 3 = neither agree nor disagree 4 = agree 5 = strongly agree
 <u>Helping behaviors (Study 2, self-rated)</u> 1. Volunteer to do things to help out. 2. Cooperatively work with others. 3. Spend time helping others with their work tasks because I want to. 4. Help others outside of my work group. 	Glomb, Bhave, Miner & Wall (2011), subset of four items used by Gabriel, Koopman, Rosen & Johnson (2018) 1 = strongly disagree 2 = disagree 3 = neither agree nor disagree 4 = agree 5 = strongly agree

Scale Items	Reference and Scale Anchors
Adaptive performance: Individual task adaptivity (Study 2, self-	Griffin, Neal & Parker (2007)
 <u>rated</u>) Adapt well to changes in my core tasks. Cope with changes to the way I have to do my core tasks. Learn new skills to help myself adapt to changes in my core tasks. 	 1 = strongly disagree 2 = disagree 3 = neither agree nor disagree 4 = agree 5 = strongly agree
 <u>Unethical behavior to help the coworker (Study 2, self-rated)</u> 1. I have concealed information from others that could be damaging to my coworker. 2. To benefit my coworker, I have not revealed to others a mistake that they made that would damage my reputation. 3. To benefit my coworker, I have withheld negative information about their performance from others. 	Umphress, Gardner, Stoverink, and Leavitt (2020) 1 = strongly disagree 2 = disagree 3 = neither agree nor disagree 4 = agree 5 = strongly agree
 <u>Helping intentions (Study 1)</u> Without being asked, I would help coworkers in this job make progress on their work. Without being asked, I would help others who had work-related problems. Without being asked, I would help coworkers avoid potential problems with their work. 	Lee and Allen (2002), using adapted subset of 3 items from Lee, Bradburn, Johnson, Lin, and Chang (2019) 1 = strongly disagree 2 = disagree 3 = neither agree nor disagree 4 = agree 5 = strongly agree
 <u>Unethical helping intentions (unethical behavior to help the coworker) (Study 1)</u> 1. I would conceal information from others that could be damaging to Taylor. 2. To benefit Taylor, I would not reveal to others a mistake that they made that would damage their reputation. 3. To benefit Taylor, I would withhold negative information about their performance from others. 	Umphress, Gardner, Stoverink, and Leavitt (2020) 1 = strongly disagree 2 = disagree 3 = neither agree nor disagree 4 = agree 5 = strongly agree

APPENDIX E. VIGNETTES FOR STUDY 1

The instructions and manipulations for the vignette experiment are presented below. The manipulations for the high conditions are written without brackets and the low conditions are written [in brackets]. Participants were randomly assigned to one of two conditions in one of the three vignettes below (i.e., they participated in one of six possible conditions).

Instructions: You will be asked to read a hypothetical scenario and answer questions about how you would think and feel and what you would do, as a result of the scenario. Please answer the questions below in regard to this hypothetical job scenario.

Hypothetical Job Scenario: Imagine that in the organization where you are currently employed, you work with several peer coworkers with whom you generally get along well. You would generally consider each of them to be kind and competent individuals. You have worked with one of your coworkers, Taylor, for about two years.

Vignette 1 (Personal growth relationship function manipulation): Taylor has [not substantially] helped you develop a new perspective on life or a life skill and has helped you become a better human being [has not made an impact in a big or meaningful way in terms of helping you become a better human being]. As an example, you recently experienced a major event in your life and Taylor helped you reframe it by seeing it as an opportunity for personal growth].

Vignette 2 (Nonwork self-disclosure manipulation): You often [rarely] share information about yourself and your personal life with Taylor. For example, you recently [did not tell] told Taylor how you feel about positive and negative events in your life outside of work and how they affect you. Overall, you [do not] keep Taylor "in the loop" on the plans, issues, and activities in your personal life. *Vignette 3* (Nonwork socializing): You socialize with Taylor outside of work often and on a completely voluntary basis [only when you are required or feel obligated to do so]. For example, you and Taylor often [have never gone] go out for lunch or happy hour and participate [have never participated] in personal hobbies together over the weekend outside of work hours.

APPENDIX F. SUMMARY OF ADAPTATIONS TO STUDY 2 DUE TO COVID-19

Impact of Covid-19 on Social Interactions

Estimates suggest that at the height of lockdown to slow the spread of Covid-19, about 94% of the U.S. population was under a stay-at-home-order by state or local government (Secon, 2020). Accordingly, between one and two thirds of employees across the nation had been mandated to work remotely (Herhold, 2020; Rosalsky, 2020). In their nonwork life, employees have also practiced social distancing by avoiding physical social contact with family and friends who live outside their household (Hohman, 2020; Tiffany, 2020). Instead, socializing has moved online, as many people have held virtual social gatherings with others (Vogels, 2020), including colleagues (Gibson, 2020). For example, events such as virtual happy hours, coffees, and meals have been a popular way for organizations to counteract the social isolation employees may be experiencing during the pandemic (e.g., Green, 2020; Maurer, 2020; Overland & Jarvis, 2020).

On one hand, although virtual social interactions with colleagues lose some richness present in face-to-face interactions—as "telecommuters experience reduced social presence with colleagues [and] receive fewer opportunities for impromptu conversations" (Raghuram, Hill, Gibbs, & Maruping, 2019, p. 9)—they can still generate some degree of "co-presence" or "experience of psychological proximity" (Gibson, 2020, p. 166). On the other hand, such virtual social events might not be welcomed by all employees, as many may be overwhelmed by additions to their schedule during what is already a stressful time or even perceive these events as intrusive and draining (Gibson, 2020; Green, 2020)—a phenomenon the popular press has called "Zoom fatigue" (e.g., Fosslien & Duffy, 2020; Morris, 2020; Sander & Bauman, 2020). Moreover, for many employees, family demands have increased, such as managing children during the workday

(e.g., Glicksman, 2020; Macmillan, 2020) or worrying about elderly parents (e.g., Martin, 2020; O'Donnell, 2020; Roberson, 2020). Prior to Covid-19, many employees were already struggling to juggle demands from work, nonwork (e.g., family), and socializing (e.g., Pillemer & Rothbard, 2018; Wilson & Baumann, 2015). During the Covid-19 pandemic, these struggles have shifted and are even amplified for many employees (Vaziri, Casper, Wayne, & Matthews, 2020). Altogether, these trends suggest that Covid-19 has driven immense shifts in how employees interact with coworkers and experience the work-nonwork interface, which necessitated adaptations to Study 2. Immediately following the conclusion of Study 1 (vignette experiment) data collection on March 13, 2020, it was clear that the Covid-19 pandemic was going to affect my plans for Study 2.

Justification and Summary of Adaptations

Summarized in Table 13 are originally planned and adapted methods for Study 2. To determine what adaptations due to Covid-19 were warranted, I conducted a literature search on virtual workplace friendship specifically (e.g., Hinds & Cramton, 2014; Maynard, Mathieu, Gilson, Sanchez, & Dean, 2019; Ollier-Malaterre, Rothbard, & Berg, 2013; Schinoff, et al., 2020), virtual/remote work generally (e.g., Gajendran & Harrison, 2007; Raghuram et al., 2019), emerging articles discussing the impact of Covid-19 on OB and HR topics (e.g., Gibson, 2020; the *Journal of Vocational Behavior*'s "Essays on the Impact of Covid-19 on Work and Workers," see e.g., Fouad, 2020), and popular press articles covering how Covid-19 is affecting work and social interactions (to keep an up-to-date pulse on how these evolved). Research on virtual work friendship and virtual work as well as popular press articles led me to conclude that coworker friendships have not been dissolved by Covid-19, but instead look and act differently in this context. Research has found that work friendships *develop* more slowly among those who work together virtually (Schinoff et al., 2020). However, Covid-19 presents a unique and interesting

situation for *existing* coworker friendships. Many employees who previously worked together face-to-face now work together virtually, and those who became friends in a face-to-face context may have also moved their friendship online. Altogether, this process allowed me to carefully consider Study 2 methods I had originally proposed through the lens of the Covid-19 context and see what still made sense and what needed to be adapted.

In terms of design, while I had originally planned on a weekly experience sampling study (ESM) for Study 2 (twice-weekly surveys for focal participant and once-weekly supervisor surveys to rate employee work behaviors), it is unlikely that nonwork self-disclosure and socializing occur this frequently during the pandemic. Accordingly, within-person variance would likely not be sufficient to conduct multilevel analyses, which would negate the intent of an ESM design. Given these concerns, I instead used a two-wave design, which allowed me to separate measurement of model variables. Focal employees completed two surveys and these employees recruited a coworker to complete one survey to rate employees' work behaviors.

Turning to measures of my independent variables, employees may still socialize with coworkers (e.g., Gibson, 2020) but perhaps do so less frequently and their activities may be narrower due to physical contact limitations associated with social distancing (e.g., virtual happy hour/coffee hour may be the new go-to way to socialize with coworkers, instead of going out for a meal, coffee, concert, play, sport, game, party, etc.). Thus, I removed the Watson et al. (1992) social activities scale and instead only used the nonwork socializing scale validated in the Pilot Study. I provided specific instructions by asking participants to refer to *virtual or face-to-face* socializing and giving examples as well as ask them in an open-ended question to elaborate on the types of socializing with colleagues they have been doing. In terms of nonwork self-disclosure, I expected this to still occur among virtual workers (Gibson, 2020), but it may arise less organically

than it would during face-to-face work (e.g., Raghuram et al., 2019). For example, in their qualitative study of virtual work friendship, Schinoff et al. (2020) found that participants engaged in self-disclosure with colleagues, which was particularly critical to getting to know their coworker in a virtual context. Hinds and Cramton (2014) found that face-to-face site visits facilitated self-disclosure among distributed workers, which continued on even after the site visit concluded. I would expect a similar dynamic to occur between coworkers who previously worked together face-to-face and now do so virtually (i.e., nonwork self-disclosure would continue on, albeit virtually). Finally, I also expected the personal growth relationship function (supplemental in Study 2) to be relevant in a virtual work context. Schinoff et al. (2020) quoted one participant who said: "*You can pick up the phone and call them, not just to discuss a work situation, but also maybe seek advice on career in general, or to discuss families. You know you trust each other, you are each other's support group or board of directors...or on each other's personal board, if you will.*" This suggests that even virtual coworkers can serve a personal growth function. Thus, I retained personal growth and nonwork self-disclosure scales.

In terms of other scale adaptations, several measures in Study 2 implicitly referred to a physical work office that is distinct from one's home (e.g., work-nonwork segmentation preferences item "I like to be able to leave work behind when I go home" and work-personal conflict item "When I get home from work I am often too exhausted to participate in personal activities"). Given that so many employees were working from home at the time of the study, I adapted such items, e.g., "while working" instead of "at work." I reframed instructions on all scales to refer to experiences since remote work associated with Covid-19 began. Employees recruited their coworker (rather than supervisor) to report on their work behaviors.

Additionally, I collected additional supplemental measures to account for and better understand context surrounding virtual coworker friendship. Scholars recently characterized Covid-19 as a "career shock," which refers to a disruptive event beyond one's control that affects one's profession (Akkermans, Richardson, & Kraimer, 2020). Other scholars predicted that employees will be impacted differently by working from home (helpful in some ways and harmful in others, Kramer & Kramer, 2020). Relatedly, Cho (2020, p. 2) observed that remote work associated with Covid-19 "blurs the micro, cross-domain boundaries that shape day-to-day work behaviors." Employees might also experience uncertainty in the labor market and threatened wellbeing (Restubog, Ocampo, & Wang, 2020). To take these possibilities into account, I collected several supplemental variables, which are outlined in Appendix D. These included stress (Motowidlo, Packard, & Manning, 1986), job insecurity (Mauno, Leskinen, & Kinnunen, 2001), talking about Covid-19 (adapted from talking about supervisor unfairness scale from Baer, Rodell et al., 2018, which is another type of negative event outside of one's control), and ambivalence about the work situation (adapted from Zipay et al., in press). Research on virtual work more generally suggests that coworkers can experience a sense of relational closeness in spite of physical distance (i.e., perceived or psychological proximity, Boyer O'Leary et al., 2014; Gibson, 2008). Thus, I collected perceived proximity in place of relational closeness (Watson, Hubbard, & Wiese, 2000). I also collected additional contextual questions related to changes in work due to Covid-19, such as how frequently and which medium participants use to communicate with the coworker. Lastly, I asked several additional open-ended questions.

Overall, in Study 2 I investigated how virtual coworker friendships energize or drain employees during Covid-19. Study 2 continues to focus on a balanced perspective (i.e., benefits and costs) of coworker friendships and builds from Study 1. With these changes, I aimed to show how virtual coworker friendships help employees survive and even thrive in troubling times together.

Study Component	Originally Planned	Adapted
Design	Weekly ESM, including 1 initial/baseline survey and weekly surveys as follows: twice-weekly surveys for six weeks (focal employees) and once-weekly surveys (supervisors)	2-wave study of employees (2 surveys spaced apart by 2 weeks) and a coworker survey
Sample	Approximately 200 employees and their supervisors recruited from Purdue staff	Approximately 200 employees recruited from Krannert alumni database, and staff of Purdue and other institutions within the Big Ten, and their coworker
Participation Requirements	 Full-time employed (work 30+ hours per week) Regularly work face-to-face with at least one coworker in the same office location 	 Full-time employed (work 30+ hours per week) (no change) Regularly work with at least one coworker willing to recruit into study
Measures	 Key changes include: Remove nonwork <i>social activities</i> with coworker scale (Watson et al., 1992) and instead use nonwork <i>socializing</i> with coworker scale (validated in Pilot Study) Collect additional supplemental variables: perceived proximity to coworker, medium of communication with coworker since remote work began (e.g., email, phone call, video call, instant message, text message), household size, stress, talking about Covid-19 with coworker, job insecurity, and ambivalence about work situation Collect supplemental open-ended questions 	
Analytic Approach	Multilevel path modeling	Path modeling (not multilevel) using structural equation modeling

Table 14: Overview of Original and Adapted Methods for Study 2 Due to Covid-19