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Can We Be Coworkers and Friends?

An Inductive Study of the Experience and Management of

Virtual Coworker Friendships

by

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ABSTRACT

Scholars and practitioners increasingly recognize that coworker friendships are integral to both individual- and organizational-level outcomes. At the same time, though, the rapid increase in virtual work has taken a principal source of adult friendships – workplaces – and drastically changed the way that individuals interact within them. No longer are proximity and extra-organizational socializing, two of the strongest predictors of coworker friendships in a co-located workplace, easily accessible. How, then, do employees become friends with each other when interacting mostly online? Once these virtual coworker friendships are forged, individuals must balance the often-conflicting norms of the friendship relationship with the coworker relationship. How, if at all, are these tensions experienced and managed when co-worker friendships are virtual? My dissertation seeks to answer these questions through a longitudinal, grounded theory study of virtual coworker friendship in a global IT firm. The emerging theory articulates the "barrier of virtuality" that challenges virtual coworker friendship formation, necessitating that individuals employ two sets of activities and one set of competencies to form friendships with one another: presence bridgers, relational informalizers, and relational digital fluency. The data also suggest that the coworker friendship tension process itself is largely similar to the previously articulated process in co-located contexts. However, the virtual context changed the frequency, types of shocks that elicited the tensions, and management of these tensions. My findings have numerous implications for the literatures on relationships at work, virtual work, and organizational tensions. They also suggest significant ways in which individuals and organizations can

more effectively foster virtual coworker friendships while minimizing the potential harm of virtual coworker friendship tensions.

DEDICATION

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CHAPTER 1

INTRODUCTION

> *Earlier on in my career, everything was, you know, when you needed to meet everybody got together in a room or met somewhere and over time that has changed dramatically in terms that there's a lot less of that. So you learn to foster relationships through different means of communication than the face to face that used to be a lot more prevalent than it is today. (New Hire #18, interview #1)*

> *[Working virtually] It's all fake and smiles and LOL and you can't really…you might as well be talking to Siri. (Experienced Hire #1)*

Relationships at work, such as mentor-protégée relationships (Kram, 1983; Ragins & Cotton, 1999), advice relationships (Nebus, 2006), supervisor-subordinate relationships (Graen & Uhl-bien, 1995), and peer relationships (Kram & Isabella, 1985), are critical to individuals' experiences of organizational life. Among other functions, they impact physical health (Heaphy, 2007; Heaphy & Dutton, 2008), are the context for value-creating routines (Brickson, 2017), infuse work with meaning (Grant & Parker, 2009; Wrzesniewski, Dutton, & Debebe, 2003; e.g., Gersick, Bartunek, & Dutton, 2000), provide the foundation for individuals' self-esteem (Leary, Tambor, Terdal, & Downs, 1995), and shape how people see themselves both within and outside of the workplace (Ashforth, Schinoff, & Rogers, 2016; Dutton & Heaphy, 2003; Sluss & Ashforth, 2007, 2008).

Though the emphasis in our organizational behavior theories is on how individuals get work done (Okhuysen et al., 2013), employees often have a pervasive need for interpersonal attachments that transcend the work and its financial incentives – turning task-based ties into multiplex ones (Baumeister & Leary, 1995; Roethlisberger & Dickson, 1939). The workplace is thus regularly cited as a critical context for the

formation of adult friendships (Dahlin, Kelly, & Moen, 2008; Roethlisberger & Dickson, 1939; Roy, 1959).

But, as the quotes above allude, organizational life is changing drastically and quickly (Colbert, Yee, & George, 2016; Okhuysen et al., 2013). There is a tremendous amount of ways to personally connect both inside and outside of work that didn't exist a decade ago, leading to a rise in virtualness (Leonardi & Vaast, 2017; Ollier-Malaterre, Rothbard, & Berg, 2013; Sias, Pedersen, Gallagher, & Kopaneva, 2012). At its core, virtualness represents, "the extent of face-to-face contact among team members (encompassing amount as well as frequency of contact)" (Fiol & O'Connor, 2005: 20). The introduction of these same communication technologies has paved the way for a rise in telecommuting and virtual teams – "teams whose members use technology to varying degrees in working across locational, temporal, and relational boundaries to accomplish an interdependent task" (Martins, Gilson, & Maynard, 2004: 808) – that is shifting the way that individuals interact with each other and experience interpersonal relationships at work (Bartel, Wrzesniewski, & Wiesenfeld, 2012; Golden & Raghuram, 2010; Jarvenpaa & Leidner, 1998, 1999; Townsend, DeMarie, & Hendrickson, 1998). Research has found that informal relationships play a crucial role for teleworkers and those on virtual teams (Gajendran & Harrison, 2007), that organizations can structure jobs to increase intimacy between virtual workers (Gibson, Gibbs, Stanko, Tesluk, & Cohen, 2011) and that virtual workers are still apt to form friendships at work, even though these relationships are largely mediated by communication technologies (Fay & Kline, 2011; Sias et al., 2012).

Despite these conclusions, as organizational members increasingly work virtually from one another, scholars and popular press authors alike often assume that the

workplace is more isolating and less friendly, even asserting that we are more virtually connected to each other than ever, yet more psychologically distant as a result (Gainey, Kelley, & Hill, 1999; Golden, 2006; Søraker, 2012; Turkle, 2011). How is virtuality contributing to our seemingly less friendly workplaces (Grant, 2015)? Why are some organizational members able to form long-distance friendships with each other, relationships so intimate and fulfilling that research suggests they may ultimately serve the same psychosocial functions as in-person friendships, while others cannot (Walther, 1995, 1996; Weiner & Hannum, 2012)? How do these individuals sustain their virtual coworker friendships, considering the potential challenges of being friends and coworkers at the same time (Bridge & Baxter, 1992; Methot, Lepine, Podsakoff, & Christian, 2016)?

Our knowledge of the fundamental differences in how individuals relate to each other when working virtually is limited in the management literature. What we do know is largely based on findings from the communications literature. Communications scholars have found that the lack of social cues in virtual interactions can impede relationship development (Carlson & Zmud, 1999; Sproull & Kiesler, 1986; Walther, 1995). Not surprisingly, organizational scholars have accordingly discovered that conflict is more likely to arise in virtual teams as a result of miscommunication and the lack of these social cutes (Jarvenpaa & Leidner, 1998, 1999). Studies of virtual teams have accordingly tended to focus interpersonal research on trust development and conflict management, as both have been found more difficult, but perhaps even more important, to establish in a virtual environment (Gilson, Maynard, Young, Vartiainen, & Hakonen, 2015; Hinds & Mortensen, 2005; Martins et al., 2004). This focus on the team level of

analysis, though, has yielded a dearth of insight on interpersonal processes at the relational and individual levels, leaving scholars with a superficial understanding of how virtuality influences some of the most fundamental properties of relationships at work. (Makarius & Larson, 2017). As Colbert and colleagues (2016b: 734) concluded, "More research is needed to fully understand how digitally mediated communication may influence communication, relationship quality, and empathy, especially in the workplace."

Given the implications of virtuality on the communication of social cues and conflict, coworker friendships may prove especially challenging to form and maintain in virtual organizations. This has important consequences because coworker friendships are key to individual and organizational success. For example, Gallup's (2017: 119) recent State of the American Workplace report deduced, "The best employers recognize that people want to build meaningful friendships and that company loyalty is built on such relationships." Nevertheless, virtual coworker friendship has rarely been the focus of studies on relationships at work (Halbesleben, 2012; cf. Sias et al., 2012). Those who have examined friendships at work and recognize their ubiquity and significance, have examined them in "traditional," co-located contexts (Berman, West, & Richter, 2002; Boyd & Taylor, 1998; Colbert, Bono, & Puranova, 2016; Dumas, Phillips, & Rothbard, 2013; Fine, 1986; Ingram & Morris, 2007; Marks, 1994; e.g., Ashcraft, 2000). How virtuality changes the processes inherent in friendship formation and maintenance, and what organizational members can do to forge healthy and strong virtual coworker friendships, is still relatively unknown.

As elaborated upon later, workplace friendships are informal relationships between any two organizational members that are voluntary and personalized (Hamilton, 2007; Sias, 2009; Sias & Cahill, 1998). Studies have supported the pervasiveness of friendship in the work context, finding that upwards of 49% of employees have at least one close co-worker friend (Marks, 1994), 30% have a best friend (Rath, 2006), and that employed adults are more likely to be friends with their coworkers than their neighbors (Dahlin et al., 2008). In the popular press, workplace friendship has consistently been a well-discussed topic. Articles encourage individuals to develop friendships with their colleagues (Adams, 2014), think about why they should care about having friends at work (Gregoire, 2013; Riordan, 2013), and similarly urge organizations to facilitate these friendships (Straz, 2015).

Because they meld an institutionalized, formal relationship (co-worker) with a voluntary, informal relationship (friendship), scholars have found that tensions underlie workplace friendships (Bridge & Baxter, 1992; Sias, Heath, Perry, Silva, & Fix, 2004). Indeed, the same popular press outlets that encourage the formation of workplace friendships also ask provocative questions like, “How do you know when it’s a good idea to be friends with your boss – and when it’s just too risky?” (Dillon & Clifford, 2014; Taylor, 2014). Situations in which workplace friendship tensions become salient are relatively common (Sias & Cahill, 1998). In a qualitative study on the functions and outcomes of coworker friendship in a law firm, Hamilton (2007) found that 45% of all respondents identified “colleague-friend tension” as a theme in their workplace friendships without being prompted.

But how does virtuality influence the way these tensions unfold and are managed over time? Perhaps one of the aspects of organizational life most impacted by a decrease in working face-to-face is how employees interrelate (Bartel et al., 2012; Hinds & Cramton, 2014; Rockmann & Pratt, 2015). Given such differences, it is particularly shocking that nearly all our work on coworker friendship occurs in organizational contexts in which employees regularly and easily connect face-to-face. Consistent with the literature on friendship formation in social psychology (Fehr, 1996), proximity and extra-organizational socializing have emerged as two of the most powerful facilitators of workplace friendships (Sias, 2009). Yet, proximity and extra-organizational socializing are less accessible when organizational members are geographically dispersed. So, what happens when we strip away the sociality of organizational life in favor of a more virtual working environment? Do we form virtual coworker friendships in the same way we do non-virtual work friendships? Do we experience and manage coworker friendship tensions similarly? If not, then what do these processes look like?

Through an inductive case study using grounded theory methods (Charmaz, 2006; Glaser & Strauss, 1967; Strauss & Corbin, 1998), this dissertation seeks to answer these questions. My study took place at Cloudly (a pseudonym), the Midwest Division field office (approximately 900 employees) of a large Fortune 500 technology firm based in the Northeast. My primary data source was semi-structured interviews, although I also relied on observation, archival data, and informal conversations with key informants. I conducted a total of 115 interviews across 64 informants. I studied 16 organizational newcomers and 12 internal role transitioners longitudinally, completing 3 interviews with each informant over a 6-month period. I also interviewed 36 tenured (i.e., non-

transitioning) employees to better understand my context and to triangulate the dynamics of my emerging theory. The individuals in my sample worked away from their central office location and, by extension, their coworkers, at least 50% of the work week, classifying them as "high intensity" telecommuters (Gajendran & Harrison, 2007). They were largely members of the most common form of virtual teams, "hybrid" teams, which are defined by a high reliance on communications technology, but also some opportunity to interact in-person (Fiol & O'Connor, 2005; Griffith & Neale, 2001).

My findings suggest that virtual coworker friendship formation is greatly impacted by the virtual context, warranting that individuals engage unique facilitators to develop these relationships. Two sets of behavior, which I have termed "presence bridgers" and "relational informalizers," and one set of skills, named "relational digital fluency," emerged as necessary for virtual coworker friendship development: Presence bridgers convey cues that enable individuals to feel like they are talking to another person (albeit largely through communication technologies). Relational informalizers facilitate the development of a personalized relationship that transcends the working relationship. And relational digital fluency facilitates individuals' ability and comfort in establishing and maintaining coworker friendships online.

In addition to the virtual context changing how individuals form friendships, it also transformed how they experienced coworker friendship tensions. Overall, virtuality made it easier to avoid experiencing friendship tensions, as interacting remotely via technology provided individuals with the necessary space to navigate the delicate balance between the two relationships. That said, individuals still (albeit to a lesser extent)

experienced these tensions in their virtual coworker friendships, but the form, frequency, and management of these tensions was impacted by virtuality.

The findings of this study contribute to a deeper understanding of relationships at work in numerous ways. First, while extant research has recognized that individuals form friendships in a virtual organization, we lack insight into how they form these friendships. My findings articulate the specific ways in which virtuality impacts the coworker friendship formation process, and how virtual employees forge these relationships given the differences between becoming coworker friends when working face-to-face and working virtually. The richness of this study additionally enabled me to highlight nuances of the virtual coworker friendship formation and tension processes that have remained largely implicit, despite their importance to the way these phenomena unfold.

My findings also have implications for our understanding of organizational tensions. While we have a solid base of knowledge related to how tensions unfold in organizational contexts (Lewis, 2000; Putnam, Fairhurst, & Banghart, 2016; Smith & Lewis, 2011), my findings reveal the various ways that virtuality changes key characteristics of the organizational, relational, and individual levels of analysis, which, in turn, shape the frequency with which these tensions emerge, the types of shocks that elicited the tensions, and how individuals manage these tensions.

In addition to these important theoretical insights, I will also suggest several implications for practice for managers and employees within organizations, as well as fruitful paths forward for scholars conducting research on virtual coworker friendships.

My dissertation proceeds as follows: I first review existing literature on the topics of relationships at work in general and workplace friendships both in "traditional," co-located contexts and virtual contexts. From there, I examine the various literatures on workplace friendship formation, tension in organizational life, and the many tactics the literature suggests that individuals employ when experiencing tensions. Next, I present the theoretical rationale for my specific research questions and a more detailed explanation of my proposed methodology for investigating them. I then present the findings of my study and discuss their implications for theory, practice, and future research.

CHAPTER 2

LITERATURE REVIEW AND RESEARCH QUESTIONS

Relationships at Work

Relationships at work are an increasingly important area of interest (see Dutton & Ragins, 2007; Ferris et al., 2009; Grant & Parker, 2009). As scholars have noted, "the bulk of organizing occurs in the context of coworker relationships" (Sias, 2009: 57). Work relationships represent all interpersonal connections that individuals have with others as they perform their jobs. They are characterized by repeated, patterned interactions over time that have some degree of mutuality (Hinde, 1997; Sias, 2009).

In organizational studies in particular, there is a growing literature on positive relationships at work. Positive relationships at work are "reoccurring connections between two people that take place within the context of work and careers and are experienced as mutually beneficial" (Ragins & Dutton, 2007: 9). Such relationships are often regarded as high quality connections and characterized by three key features: (1) higher emotional carrying capacity (i.e., individuals in the relationship can express more and a greater range of emotions); (2) greater tensility (i.e., the relationship can endure through hardships); and (3) a capacity for connectivity (i.e., they are generative) (Dutton & Heaphy, 2003; Ragins & Dutton, 2007). Workplace friendships have been positioned as a unique type of positive relationship at work (Colbert, et al., 2016a). Indeed, unlike high quality connections more generally, which are potentially fleeting and not necessarily personalized (Dutton, 2003; Dutton & Heaphy, 2003), workplace friendships are relatively persistent and require that individuals treat each other as unique, rather than as merely role inhabitants (Hamilton, 2007; Sias & Cahill, 1998).

There are also other essential features of coworker friendships. As defined earlier, coworker friendships are informal relationships between any two organizational members that are voluntary and personalized (Hamilton, 2007; Marks, 1994; Sias & Cahill, 1998; Winstead, Derlega, Montgomery, & Pilkington, 1995). They are informal in that they are not organizationally prescribed and, unlike the purely instrumentally-based economic exchange thought to guide work relationships (Blau, 1964; Cropanzano & Mitchell, 2005; Goodman & Friedman, 1971), are marked by norms of communal exchange, or "a positive attitude toward benefiting the other when a need for the benefit exists" (Clark & Mills, 1979: 13). They are voluntary in that friendships are associated with reciprocal liking and positive affect, and are maintained for the satisfaction that individuals derive from the relationship itself (Berman et al., 2002; Ho & Levesque, 2005; Morrison, 2004). And workplace friendships are personalized in that, as noted, friends go beyond seeing each other as merely role inhabitants. They are accordingly also characterized by higher levels of intimacy, trust, equality, mutuality, and self-disclosure than non-workplace friendships. In short, individuals reveal a greater range (both breadth and depth) of information about themselves to friends (Ferris et al., 2009; Gibbons, 2004; Sias & Cahill, 1998).

One of the literatures in which coworker friendships has consistently appeared is that of social networks. Social network scholars recognize that dyadic relationships exist within larger networks of relationships in organizational contexts (Krackhardt & Brass, 1994). They have looked at various types of ties between individuals, such as informational ties (e.g., Morrison, 2002), advice ties (e.g., McDonald & Westphal, 2003; Nebus, 2006), and as I will discuss in more detail later, friendship ties (Gibbons, 2004;

Methot et al., 2016). The vast literature utilizing a social network perspective views these ties as the primary means through which resources (e.g., information, power, advice) flow throughout a network of individuals (Borgatti, Mehra, Brass, & Labianca, 2009; Nebus, 2006; e.g., Krackhardt & Porter, 1986; Podolny, 2001; Uzzi, 1997). Networks are defined as sets of nodes representing the presence or absence of a tie between two individuals (Brass, 2012). Within a network, relationships are often evaluated based on the content (e.g., strength or duration) of the tie. While a social network lens on relationships has been useful and generative in deepening our understanding of the content and structure of relationships at work, it cannot provide insight into the richness or dynamics of dyadic relationships (Hamilton, 2007).

Regardless of the theoretical lens, there are diverse types of relationships that may develop and overlap at work. In their seminal book, Katz and Kahn (1978) distinguished "secondary" from "primary" relationships. Secondary relationships are organizationally prescribed, generally absent of affect, and guided by universally appropriate norms (i.e., individuals in the role are expected to interact with others similarly regardless of who the role occupant is). Primary relationships (e.g., friendships) are particularized, include affect, and their maintenance is motivated by the satisfaction derived from the relationship, rather than out of organizationally prescribed obligations. At the organizational level, Uzzi (1997, 1999) invoked Granovetter's (1985) notion of embededdness – "the extent to which economic action is linked to or depends on action or institutions that are non-economic in content, goals, or processes" (Granovetter, 2005: 35) – when he found that firms derived greater benefits from embedded ties (personal relationships characterized by trust and reciprocal obligation) than from arm's-length ties

(those characterized by impersonality and sporadic transactions). Related concepts can be found in social networks scholars' conceptualization of multiplex ties (Burt, 1983), Bridge and Baxter's (1992) "blended relationships," and "relational pluralism" (Shipilov, Gulati, Kilduff, Li, & Tsai, 2014) or "the extent to which a focal entity (a person, a team, or an organization) derives its meaning and its potential for action from relations of multiple kinds with other entities" (p. 449).

Because individuals occupy different organizational roles, the nature of the relationship between two people and the types of resources the relationship generates, varies (Sluss & Ashforth, 2007). For this reason, scholars have studied many different relational partners in dyadic relationships at work, such as the relationships that individuals have with their organization (Shore, Coyle-Shapiro, & Tetrick, 2012; Tsui, Pearce, Porter, & Tripoli, 1997), their customers and clients (Rafaeli, 1989), and their mentors and protégées (Kram, 1983, 1985; Ragins & Cotton, 1999; Ragins & Kram, 2007). Given the importance of leaders in shaping how individuals experience their work and perform (Bass, 1985), it is not surprising that the bulk of what we know about workplace relationships looks specifically at the supervisor-subordinate relationship (Eby & Allen, 2012; Sias, 2009). Scholars have extensively examined how factors like personality (Nahrgang, Morgeson, & Ilies, 2009) and shared connections impact the quality of the exchange relationship between leaders and followers (i.e., leader-member exchange, LMX; Graen & Uhl-Bien, 1995). LMX, in turn, influences important work outcomes such as performance and citizenship behavior (Ilies, Nahrgang, & Morgeson, 2007; Wang, Law, Hackett, Wang, & Chen, 2005).

While our knowledge of relationships at work is vast and our understanding of their importance is mature, we know much more about what leads to the formation of various relationships at work (especially between those who are co-located, which captures working in an office together every day) and the consequences of these relationships than we do about the dynamics internal to them. As but a few examples of consequences, we know that the social support received from relationships at work (Podolny & Baron, 1997) is a critical outcome, and has the potential to buffer individuals from stress in times of crisis (Cohen & Wills, 1985; Dutton, Worline, Frost, & Lilius, 2006; Feeney & Collins, 2015), that certain types of relationships at work, including friendships, serve specific functions, such as career advancement and personal growth (Colbert et al., 2016a), and that relationships with individuals who serve a mentoring or developmental function provide both career and psychosocial support, including coaching, counseling, role modeling, and social support (Higgins & Kram, 2001; Kram & Isabella, 1985; Ragins & Cotton, 1999). This emphasis on predictors and outcomes of relationships, though useful and generative, highlights the lack of a rich understanding of dynamics internal to the relationships themselves – such as how individuals capitalize on opportunities to form, maintain, and overcome challenges to their maintenance – with workplace friendship dynamics in particular receiving little attention. This gap is particularly critical to lessen because, by understanding such internal dynamics, scholars and practitioners alike can better equip organizational members to forge functional coworker friendships with one another.

Further, while individuals have traditionally been co-located with co-workers, the introduction of more advanced communication technologies has spawned a growing

literature on virtual teams – defined earlier as "teams whose members use technology to varying degrees in working across locational, temporal, and relational boundaries to accomplish an interdependent task" (Martins et al., 2004: 808; see also Bell & Kozlowski, 2002; Townsend et al., 1998) – and telecommuters, or individuals who work primarily away from a co-located office (e.g., Bartel, Wrzesniewski, & Wiesenfeld, 2012; Golden & Raghuram, 2009; Golden, Veiga, & Dino, 2008). Because this study explores the dynamics of coworker friendships in such virtual contexts, I will more deeply examine the existing literature at the intersection of workplace relationships and virtuality.

Virtual Relationships at Work

The primary differences between co-located individuals and those who work virtually is that the latter are spatially distributed and their communication is primarily mediated by technology (Bell & Kozlowski, 2002; Townsend et al., 1998). Virtual teams allow for increased flexibility and responsiveness by enabling members to work across space and time (Bailey, Leonardi, & Barley, 2012; Boh, Ren, Kiesler, & Bussjaeger, 2007; Koles & Nagy, 2014). However, the very same differences that provide benefits to organizations may prove detrimental as virtual forms of organizing likely lead to new and different coordination and cohesion challenges (Townsend et al., 1998), such as unique patterns of communication, conflict, and trust (Martins et al., 2004; Wilson, Straus, & McEvily, 2006). As an example of communication pattern differences, scholars have found that the more complex the task a virtual team is charged with, the more likely mediated communications are to be synchronous, rather than asynchronous (Bell & Kozlowski, 2002). However, there is little consensus around how to define virtuality.

Consequently, scholars have relied on typologies of virtual teams (e.g., Bell & Kozlowski, 2002; Gibson & Gibbs, 2006; Kirkman & Mathieu, 2005). These typologies all have a focus on a team's "*extent of virtualness*" in common (Martins et al., 2004: 807, italics in original).

Bell and Kozlowski (2002), for example, argued that virtual teams differ along the following dimensions: temporal distribution, boundary spanning, and lifecycle and roles. What this means in practice, for example, is that some teams have fluid membership and roles while others do not, and some may be distributed across space or time – or both (Bell & Kozlowski, 2002). The authors suggested that much of the structure of a virtual team is related to the complexity of the team's task(s) (complexity refers to the extent to which the task requires communication and coordination between team members). Martins et al. (2004) similarly boiled down the attributes of virtual teams as using technologies to work across locations, timing (both the team lifecycle's and individual time zones), and relational boundaries (i.e., team members' affiliations with other subgroups within the organization). Kirkman and Mathieu (2005) also modeled team virtuality as the intersection of synchronicity, informational value (i.e., extent to which virtual tools give access to valuable data), and the extent of use of virtual tools. And finally, Gibson and Gibbs (2006) looked at the characteristics of geographic dispersion, electronic dependence, structural dynamism, and national diversity. Scholars have also differentiated between "pure," "hybrid," and "traditional" teams (Fiol & O'Connor, 2005; Griffith & Neale, 2001; Griffith, Sawyer, & Neale, 2003). Teams are categorized as one of the three based on the degree to which team members rely on technological support, and work across physical location and time. Pure virtual teams never meet face-to-face

and exclusively rely on computer-mediated communication (CMC), hybrid teams also heavily rely on CMC but meet "occasionally[1]," and face-to-face teams always work in-person with very little reliance on CMC. Strikingly similar in their conceptualization of the continua, these frameworks offer nuanced ways of thinking about the concept of virtuality and the various ways in which individuals on teams can be considered virtual workers.

Relational processes in a virtual world. Because much of the work on virtual organizations has remained at the team level of analysis (Makarius & Larson, 2017), we know far less about how working virtually influences phenomena at the relational and individual levels. To be sure, as can be seen from the proliferation of typologies, the work on virtual teams has largely focused on defining them, understanding their key attributes, and identifying their various structures (see also O'Leary & Cummings, 2007), without unpacking the interpersonal processes between and within virtual team members. This is particularly surprising given that positive relationships with team members as well as with one's leader greatly impact how telecommuters feel about their jobs. Indeed, Golden (2006) found that the quality of team-member exchange (TMX) fully and LMX partially mediated the relationship between extent of telecommuting and job satisfaction.

Work on telecommuters has suggested that working virtually leads to "relational impoverishment" (Gajendran & Harrison, 2007: 1525) because remote workers do not have access to interactions with coworkers in the same way that co-located employees do (Golden, 2006; see also Grant, 2015). The lack of rich interactions creates difficulty in

[1] To my knowledge, scholars have yet to articulate a specific amount of face-to-face interaction less than 100% at which a virtual team is considered "hybrid" vs. "face-to-face."

establishing trust, a critical dimension of moving a work relationship through the various stages of closeness (Ferris et al., 2009). It prompts the use of alternative strategies to form trust with virtual workers, such as utilizing predictable patterns of communicating, and proving competence early on (Jarvenpaa & Leidner, 1998, 1999; Yakovleva, Reilly, & Werko, 2010). Despite these differences, Gajendran and Harrison's (2007) meta-analysis found that telecommuting is positively related to the quality of individuals' relationships with their supervisors and had no direct effect on coworker relationship quality when individuals work less than 50% of the time virtually. However, these findings did not hold true for those who they term "high intensity" telecommuters, or individuals, who, as noted, work virtually most the time. While Gajendran and Harrison (2007) found that telecommuting was unrelated to relationship quality with coworkers for "low intensity" telecommutes, they discovered that the relationship between telecommuting and coworker relationship quality was negative for those high intensity telecommuters. Consequently, more recent work on virtual teams has recognized that relationship quality for individuals is heavily dependent on moderators, such as the extent of telecommuting and richness of the communication media they are utilizing (Golden et al., 2008) or the content of that communication (Wilson et al., 2006). As a result, relationships between virtual team members can be facilitated by the organization in unique ways, such as through planned social events (Kotlarsky, Oshri, & Willcocks, 2007).

Foundational theories of virtual relationship development. While the management literature has rarely studied the interpersonal processes inherent in CMC (cf. Barry & Fulmer, 2004; Jarvenpaa & Leidner, 1999; Walther, 1995; Yakovleva et al., 2010), scholarship in the fields of communication and psychology provide a solid

foundation from which organizational scholars can better understand virtual workplace relationships. The differences in relational process and outcomes between CMC and face-to-face (FtF) communication that often serve as the basis for theoretical and empirical work for management scholars are largely predicated on the assumption that communicating via virtual media is markedly different than communicating in person. Such assumptions harken back to what communication scholars have termed the "cues-filtered-out" perspective (Culnan & Markus, 1987). This perspective suggests that the nonverbal cues present in face-to-face communication no longer exist – they are filtered out – once communication occurs through CMC. This dearth of nonverbal communication inherently limits the amount of information that individuals can send and receive when communicating.

Social presence theory (Short, Williams, & Christie, 1976) was the first of such theories to suggest that CMC may adversely impact individuals' ability to convey important information. The theory speculates that CMC restricts how socially present, or "the degree of salience of the other individual in the interaction and the consequent salience of the interpersonal relationship" (Short et al., 1976: 65), individuals are in CMC interactions. However, scholars have since struggled to empirically validate this first iteration of social presence theory. As a result, they began refining the theory, ultimately redefining social presence to more accurately capture a sense of belonging, or "the degree of feeling, perception, and reaction while being connected by CMC to another intellectual entity" (Tu & McIsaac, 2002: 140).

Following social presence theory, media richness theory argues that communication vehicles differ in their ability to convey "rich" information, such that the

"richer" the channel, the more likely that social context cues will be conveyed (Daft & Lengel, 1986; Daft, Lengel, & Treviño, 1987; Treviño, Webster, & Stein, 2000). Daft and colleagues prescribe that individuals should appropriately choose their virtual communication medium based on the medium's richness. They would predict, for instance, that communicating visual cues through email rather than through video technology might create misunderstandings and confusion (Byron, 2008). Highly similar, Rutter (1987) developed cuelessness theory, which argued that the lack of social cues communicated through CMC fosters psychological distance, leading to a depersonalized relationship focused more on tasks than socioemotional content.

Like social presence, media richness, and cuelessness theories, channel expansion theory (Carlson & Zmud, 1999) also sees CMC as potentially constrained in communicating "rich" information. However, channel expansion theory questions the assumption that it is the vehicles themselves that constrain communication. Instead, it suggests that CMC is limited by individuals' perceptions of communication media, rather than the media themselves being limited. Perceptions of richness potential are shaped by four dimensions of experience with CMC – experience with the channel, experience with the messaging topic, experience with the organizational context, and experience with communication co-participants – and the knowledge derived from these experiences. Ultimately, the theories that belong to the cues-filtered-out perspective suggest that relationships formed and maintained through CMC lack the potential to become as intimate or rich as those formed and maintained through Face-to-Face.

But, as field research began to show that individuals were, indeed, able to form more personalized relationships online, scholars introduced the social identity model of

deindivuation effects (SIDE) and social information processing theory (SIP) to the CMC literature. Both theories consider reasons other than the lack of social cues that prompt differences in how virtual vs. face-to-face communication is used and received. The SIDE model postulates that the impact of CMC is a function of the virtual communication medium itself interacting with features of the social context and with whom the individuals are (i.e., their social identities). It predicts that the relative anonymity of CMC fosters cohesion between individuals as social identities become more salient and interaction partners are assumed to represent the group (Johri, 2012; Postmes, Spears, & Lea, 1998).

Somewhat contrary to the SIDE model, Walther (1992, 1995) proposed SIP[2] theory, in which he argued that, with time, the formality and dearth of richness that tend to differentiate CMC from FtF communication dissipate as individuals adapt to the medium and gain personalized knowledge about one another through repeated interactions. Walther presents a process whereby individuals communicating via CMC are motivated to build relationships, decode cues, and form impressions about the other to derive an individuated sense of who the person is. He further suggests that individuals maintain virtual relationships through strategies, such as communicating nonverbals in places where they would be apparent in FtF interaction (e.g., exclamation points to convey excitement, sideways smiles to convey happiness, all caps to convey anger). In short, SIP suggests that the biggest difference in relationship development when

[2] In the management literature, "social information processing" most commonly references Salancik and Pfeffer's (1978) perspective on how individuals use social information to formulate job attitudes. Walther (1995: 190) acknowledged this nomenclature overlap and argued that his use of the term was "consistent with the psychological literature on impression-formation and related social cognition."

communicating online versus in person is the length of time it takes to get to know the relational partner. Building on his prior work, Walther (1996) also established that, sometimes, CMC might actually facilitate *hyperpersonal* communication, such that levels of intimacy between those interacting via Intermediated Communication Technology may actually exceed those interacting in person, largely because the lack of social context cues allows individuals to idealize their relationship partner, validating them in ways that ultimately changes how that person behaves via CMC (Bargh, McKenna, & Fitzsimons, 2002; Merton, 1948).

Recent work on virtual relationship development. Contemporary perspectives of how individuals form and maintain virtual relationships have built on these foundational theories. The idea that social presence in particular is key to virtual relationships has gained traction. Communication scholars have suggested that individuals can establish social presence and facilitate close relationships through language in CMC by using affective, interactive (the use of language that elicits a response from the receiver, such as questions to signal openness to interaction), and cohesive (language that emphasizes connection; e.g., "we") communication (see Christen, 2013). Psychologists have also suggested that closer relationships can be developed when individuals show their "true self" via CMC (Bargh et al., 2002; McKenna, Green, & Gleason, 2002), as well as share personal and contextual information (Johri, 2012). Similarly, Cramton, Orvis, and Wilson (2007) found that geographic dispersion leads to "situational invisibility," or the lack of important information about the individuals and context in which these individuals work. As a result of situational invisibility, employees were more apt to make attribution errors by attributing a failure to a relationship partner rather than the situation because they

lacked the necessary information about the situation to make an external attribution. This challenge to virtual team relationship dynamics prompted the authors to suggest that dispersed employees should provide "situational explanations" to help teammates make sense of events.

Scholarship also suggests that individuals differ based on their ability to work successfully in a virtual environment. Briggs and Makice (2012), for example, introduced the term "digital fluency," described by Colbert et al. (2016b: 732) as going, "beyond simply knowing how to use a few programs or basic applications. Those who are digitally fluent have achieved a level of proficiency that allows them to manipulate information, construct ideas, and use technology to achieve strategic goals." Relatedly, Makarius and Larson (2017: 5) presented "virtual intelligence," defined as "the ability to recognize, direct, and maintain cognitive resources in a virtual work environment." The authors argue that those who are successful at working virtually recognize the virtual environment as different (i.e., higher propensity for subgroups to form, modes and norms of communication differ), have the ability to identify and organize the proper steps to complete a virtual task using different information than in a non-virtual environment, and monitor and update knowledge related to the virtual environment. While both the digital fluency and virtual intelligence concepts highlight that individuals have to adapt their behaviors and ways of working when doing so virtually, they stop short of allowing us to fully understand how and why some individuals are better able to form and maintain both formal and informal coworker relationships in particular. Because of the uniqueness of the friendship relationship in organizational settings, it is likely that the necessary skills and abilities to form friendships go above and beyond what it takes to successfully work

with a coworker. But we do not currently have insight into this. Indeed, Makarius and Larson (2017: 25) note that much remains to be done in unpacking virtual workplace relationships, "As virtual work becomes less structured and more organic, incorporating literature on the dynamics of interpersonal relationships such as dyads could be an opportunity to contribute to future virtual work research."

As can be seen, although work has been done in the communications literature to better understand how individuals form and maintain personalized virtual relationships, we have very little insight into the specific behaviors and proficiencies that it takes to form friendships in virtual work settings. Further, workplace friendship is a unique type of relationship that blends a work-based tie with a personal, affect-laden tie that transcends the work. It is likely that the virtual context exerts a unique effect on these relational dynamics; yet, we currently do not possess such insight. I turn now to better understanding the dynamics of workplace friendships in general, and then when individuals work virtually in particular.

Coworker Friendships

Individuals frequently become friends with each other at work (Berman et al., 2002; Ingram & Zou, 2008). Being friends with those one works with has the potential to benefit both the friendship and the work relationship (Bridge & Baxter, 1992). Meta-analysis has shown that merely having a job designed with the opportunity to make friends (Hackman & Lawler, 1971; Morrison, 2004; Riordan & Griffeth, 1995) is positively related to outcomes like increased job satisfaction and decreased absenteeism (Humphrey, Nahrgang, & Morgeson, 2007). Because workplace friendships often blossom in organizational contexts, both task- and non-task-related interactions (Tschan,

Semmer, & Inversin, 2004) serve as the basis for their formation. For example, friendship is often mentioned as a likely product of an informal mentoring relationship (Kram, 1985; Kram & Isabella, 1985; Ragins & Cotton, 1999) or a positive work relationship (Colbert et al., 2016a).

Characteristics of workplace friendships. In addition to the various characteristics of workplace friendships defined earlier, workplace friendships are also processual; they are continually evolving and changing, often as a function of their context (Lazarsfeld & Merton, 1954; Maines, 1981). Individuals have to make the initial decision to deepen a relationship from what the role-relationship requires to a voluntary friendship, making trade-offs as the friendship transforms (Kram, 1983; Kurth, 1970). Within the broader category of workplace friendships there are more specific types, such as peer workplace friendships, or friendships between those who occupy similar positions in the organization (Kram & Isabella, 1985; Sias & Cahill, 1998), and supervisor-subordinate workplace friendships, or friendships between those with a formal reporting relationship (e.g., Boyd & Taylor, 1998; Taylor, Hanlon, & Boyd, 1992). My definition embraces workplace friendships between all potential types of individuals (i.e., any two organizational members), including those with status differentials.

Scholars have also differentiated workplace friendships from task relationships. Task relationships are instrumental, "formed with the intention to derive some kind of reward or create a joint product" (Dahlander & McFarland, 2013: 72; Lincoln & Miller, 1979), while friendships, as previously mentioned, are seen as an end in themselves. Friendships have likewise been distinguished from "friendly relations," thought to be an initial stage as a friendship forms, considered less intimate than friendships per se, and

may be involuntary as colleagues are forced to maintain a collegial relationship when required by the broader organizational context (Bridge & Baxter, 1992; Kurth, 1970). Though friendships certainly share similarities with workplace romances (Quinn, 1977), as both are relationships that combine elements of the personal and professional, studies have sufficiently discerned the two in terms of functions and dynamics (Sias, Smith, & Avdeyeda, 2003; Wright, 1985).

Coworker friendship outcomes. Having friends at work has been associated with both good and bad performance outcomes. To name a few positive outcomes, workplace friendships are positively related to job significance (Mao, Hsieh, & Chen, 2012), increased social capital (Adler & Kwon, 2002), and successful newcomer assimilation (Morrison, 2002; e.g., Zorn & Gregory, 2005). Friends are more likely to communicate information to each other and to provide resources and access to information that individuals would not otherwise have, such as organizational norms (Brass, 1984, 1985; Krackhardt & Kilduff, 1990; Lincoln & Miller, 1979; Podolny & Baron, 1997). In the social psychology literature, friendship has been meta-analytically found to lead to higher levels of positive engagement, conflict management, task-oriented activity, and mutuality (Hartup & Stevens, 1997; Newcomb & Bagwell, 1995). At the same time that benefits accrue from friendship, forming and maintaining friendships involves costs (Hays, 1985). For example, at the individual level, friendship takes time and personal resources (Methot et al., 2016); for the organization, the quality of information that individuals share may be reduced as relational partners are motivated to maintain the health of the relationship (Clark & Kashima, 2007; McDonald & Westphal, 2003). And when a friend leaves an

organization, it might likewise influence the stayer's motivation to leave (Brockner, Grover, Reed, DeWitt, & O'Malley, 1987; Krackhardt & Porter, 1986).

Following workplace trends in shifts to higher levels of interdependence (Rousseau, 1997), scholars have also looked at friendships in the work group setting, as the proximity of work groups likely facilitates personal relationships. Indeed, as Chun and Choi (2014: 438) describe, "the collective nature of work groups provides a context in which individuals can desire warm social relationships and in which those desires can be satisfied." Tse and Dasbourough (2008) observed that team members do indeed value the relationship-oriented aspects of being in a team, finding that friendship was a recurring theme in how team members described their relationships. Team-level research has determined that friendship groups (i.e., groups with close interpersonal ties and positive, amiable pre-existing relationships among team members; Jehn & Shah 1997) perform significantly better on both decision-making and motor tasks than do groups of non-friends (i.e., acquaintance groups). Jehn and Shah (1997) attributed these differences in performance to friendship groups being more committed and more cooperative. Even the desire to form friendships can influence individual action. Chun and Choi (2014) found that the average level of the need for affiliation in a work group is negatively related to relationship conflict, uncovering the need to belong as an inhibitor of intragroup conflict, and suggesting that as individuals strive to deepen their relationships with team members, they are less likely to engage in conflict over differences in non-task issues, such as personality and values (Jehn, 1995).

Coworker friendship in the social networks literature. As mentioned, social network scholars have also studied workplace friendships from a network perspective.

For example, Lincoln and Miller (1979) found that friendship networks (informal networks) look different than formal (i.e., task-based) networks (i.e., high-status individuals occupy central positions in organizational networks, while informal networks are organized around similarity). Burt (1983) described how individuals organize their network ties in terms of friends, acquaintances, work, or kin, and Ibarra (1993) argued that networks are often considered either instrumental or expressive (i.e., friendship). Strategy scholars have looked at the implications of friendship on CEO or board behavior using a network lens, for example finding that CEOs forge friendship ties with other CEOs in order to access needed resources (Westphal, Boivie, & Chng, 2006). And recent work on developmental networks looks at both intra- and extra-organizational development networks, comprised of people who serve as counselors and advisers to an individual, often providing friendship as a support function (Dobrow, Chandler, Murphy, & Kram, 2012; Kram, 1985). As Methot and colleagues (2016) note, however, most work has confounded pure friendship and multiplex relationships by often measuring a friendship tie only (e.g., Chiaburu & Harrison, 2008; Jehn & Shah, 1997; Lincoln & Miller, 1979). Theoretically, there are also implications of having a multiplex tie with competing norms (e.g., workplace friendship), such as affect spillover from one relationship to the other. Consequently, measuring only one part of the workplace friendship cannot capture the full breadth and depth of the relationship.

In a network study looking at the double-edged sword of workplace friendship, Methot and colleagues (2016) found that the size of a person's friendship network at work is positively associated with outcomes such as task performance, emotional support, trust, and positive affect. However, they simultaneously found that individuals with larger

friendship networks are also more likely to report feelings of emotional exhaustion because the maintenance difficulties associated with workplace friendships dampened the overall positive effects that friendships have by utilizing resources (Hobfoll, 1989, 2001) that might otherwise have been used elsewhere, including individuals' work. These maintenance difficulties also made it more difficult for individuals to sustain workplace friendships, and engendered stronger feelings of obligation to their coworkers. Despite such dichotomous outcomes, Methot and colleagues (2016: 35) concluded that the advantages of a large friendship network outweigh the costs, noting that "the benefits of informal friendship networks are realized when they overlap with work-related networks."

In total, we know that there are meaningful differences in the form and function of informal workplace relationships when compared to formal workplace relationships. Informal relationships at work, such as friendship, engender various work-related outcomes, most of which are positive. Consequently, scholars have focused a substantial amount of energy on unpacking how these relationships form.

Coworker Friendship Formation

Existing research on how workplace friendships begin and progress has tended to take a stage model approach, describing the characteristics of friendships as they evolve over time. My discussion of workplace friendship formation takes a similar approach, first examining the initial basis for friendship formation, namely homophily and expectations for exchange, then exploring the contextual factors that facilitate or deter development of the relationship, followed by a review of the various stage models scholars have proposed for workplace friendships.

Initial formation. The organizational studies literature on friendships at work as well as the social psychology literature on friendships more broadly have extensively explored predictors of when individuals are likely to forge friendships. Research has shown that the extent to which individuals make friends at work is determined partly by extrinsic factors, such as the opportunity to make friends, and intrinsic factors, such as the desire for affiliation (Parker, 1964). Scholars have accordingly grouped the primary antecedents of workplace friendship into two main categories: individual and contextual (i.e., organizational context, life events, and non-work socializing) (Sias, 2009).

Individual factors include those that stem from the individuals themselves and primarily influence the beginning phases of friendship, setting the stage for how the relationship develops (Sias, 2009). These factors are largely based on the premise of homophily, or that individuals prefer to form relationships with others who are like them (Byrne, 1961; McPherson, Smith-Lovin, & Cook, 2001; Sias, 2009; Tajfel & Turner, 1986), as well as the type of exchange relationship associated with friendship (communal vs. instrumental exchange) (Blau, 1964; Clark & Mills, 1979).

In a classic study of friendship formation, Lazarsfeld and Merton (1954) found that there are two types of homophily. The first, status homophily, refers to the degree of similarity on social attributes such as race, gender, ethnicity, education, religion, and network location. Scholars have since established that individuals who hold similar structural positions in an organization are more likely to see each other as friends (Ingram & Zou, 2008; Lincoln & Miller, 1979; Zou & Ingram, 2013), that women are more likely to turn to other women for friendship (Ibarra, 1992), and that minority organizational newcomers are more likely to become friends with other minority individuals, even in the

face of fewer to choose from (Mollica, Gray, & Treviño, 2003). Network scholars Lincoln and Miller (1979) found that closer friendship ties are better predicted by similarities in attributes such as race, sex, ethnicity, and socioeconomic background than instrumental ties. Similarly, Gibbons and Olk (2003) found that homophily, particularly ethnic similarity, breeds a friendship tie, which leads to structural similarity and similar network centrality for the individuals, ultimately strengthening the level of friendship.

The second type of homophily is value homophily, or perceived similarity in attitudes, abilities, beliefs, and aspirations (McPherson et al., 2001; e.g., Gibbons, 2004). For example, Boyd and Taylor (1998) suggest that the initial step to a high quality LMX relationship includes sharing the same basic attitudes toward the job and work (see also Tsui, Egan, & O'Reilly, 1992). Additional individual factors, as noted, include individuals' motivation to form friendships (Hays, 1985) and the extent to which they prefer intimacy with others or view friendships as a means of attaining power (McAdams, 1985).

As previously described, workplace friendships are typified by communal rather than instrumental exchange. The differences in exchange processes have profound implications for how workplace friendships form. For instance, at the network level, Lincoln and Miller (1979) discovered that friendship networks at work follow a distinct pattern from friendship networks outside of work, and also differ structurally from instrumental networks. The authors concluded that organizational friendship networks tend to be comprised of highly segmented, but dense chains of ties in some locations of the network and sparse ties in others, while instrumental ties are more uniformly distributed. They attributed these differences to the fact that friendship relationships serve

a different purpose in organizations than do instrumental relationships (i.e., "they are systems for making decisions, mobilizing resources, concealing or transmitting information, and performing other functions closely allied with work behavior and interaction"; p. 197). And Ferriani, Fonti, and Corrado (2012) discovered that the social content of a tie better predicts the initial formation of a multiplex relationship across an organization than does the instrumental, or work-based, content of the tie.

Perhaps no group of individuals in an organization are more susceptible to experiencing the dynamics of friendship formation that those who are newly hired and/or internally transitioning to a new role. When individuals undergo role transitions, such as entering a new organization or accepting a promotion, research has shown that it changes their social landscape at work, including both gaining and losing relationships (Jonczyk, Lee, Galunic, & Bensaou, 2016). Yet how these dynamics unfold over time – especially in virtual contexts – is a quite understudied phenomenon. We know that certain types of ties (e.g., multiplex and trusting) are less likely to be lost during role transitions and certain other types of ties (e.g., those with individuals of higher rank or expertise) are more likely to be formed (Jonczyk et al., 2016). But *how* informal coworker relationships form, are maintained, and help individuals on virtual teams adjust throughout a role transition has never (to my knowledge) been examined. There are glimmers of this research in the socialization literature, which acknowledges that relationships facilitate adjustment (e.g., Morrison, 1993, 2002; Settoon & Adkins, 1997). However, Ashforth, Sluss, and Harrison (2007) noted that an assumption of much of the socialization literature is that socialization occurs in traditional work arrangements.

Given that role transitions are ubiquitous in organizations (Ashforth, 2000; Louis, 1980; Nicholson, 1984), our lack of a deep understanding of the dynamics of relationships during such a critical time in organizational members' tenure is an important omission. Additionally, while studies have examined the implications of transitioning *to* a virtual context (Raghuram, Garud, Wiesenfeld, & Gupta, 2001), we have very little knowledge of role transitions *within* a virtual context (Ahuja & Galvin, 2003). With the quickly changing nature of work and increasing amount of virtual work, this is particularly critical to understand because "virtual work creates distance between employees and their organizations—their supervisors, coworkers, subordinates, and the tangible elements of the organization as a whole" (Raghuram et al., 2001: 385). All of which suggests that the experience of role transitions – in particular, the social experience – is quite different for individuals who work virtually (Ahuja & Galvin, 2003).

Once a friendship is formed, then, what influences its dynamics and how do individuals experience the relationship? As noted above, contextual factors play a significant role in the formation and ongoing dynamics of workplace friendships.

The influence of context. The organizational context, as "situational opportunities and constraints," is an important influence on how individuals experience and behave at work (Johns, 2006: 386). Among its many impacts on organizational behavior, context shapes the meaning of events, situations, behaviors, and attitudes (Dutton et al., 2006). It provides clues as to what is normatively appropriate and what is not (Hochschild, 1979). It also makes some environmental features more salient than others (Johns, 2006). Workplace friendships comprise part of the social context at work, "the interpersonal interactions and relationships that are embedded in and influenced by the jobs, roles, and

tasks that employees perform and enact" (Grant & Parker, 2009: 322). The social context at work includes the formal social context, which includes organizationally sanctioned relationships (e.g., supervisor-subordinate), and the informal social context, or those relationships – like friendship – that are not part of the formal organizational chart. As jobs become more interdependent (Wageman, 2001), and as organizational structures increasingly shift to collective, team-based work (Griffin, Neal, & Parker, 2007; Rousseau, 1997), scholars have suggested that the informal social context is likely to become even more impactful to organizational behavior than recognized by scholars (Uhl-Bien, 2006; cf. McEvily et al., 2014).

What makes workplace friendships unique from non-work friendships is the very fact that they exist in organizations (Kurth, 1970). A key notion in the definition of the social context is that it is influenced by the more formal organizational context, or the roles, jobs, and tasks that individuals are hired to fulfill (Katz & Kahn, 1978; Parker, 1964). As Hamilton (2007: 10) noted, "the workplace setting does not operate only as a container but has a significant impact on friendships that develop among organization members." Indeed, Fine (1986: 196) suggests that an organization's culture is the factor that most "shapes and directs" workplace friendships. At the same time, the formal organizational context and the informal relationships within it are not mutually exclusive. Rather, they reciprocally influence each other (Granovetter, 1973; Reis, Collins, & Berscheid, 2000; Schulte, Cohen, & Klein, 2012). As an example of organizational practices directly impacting dyadic interactions, Gittell, Seidner, and Wimbush (2010) found that high performance work systems strengthen relationships which, in turn, impact the effectiveness of the instituted work systems.

Contextual factors, while also influencing initial formation, perhaps have their greatest influence on the development of the relationship beyond the initial interaction (Parks & Eggert, 1991; Sias, 2009; Sias & Cahill, 1998). Internal to the organization, the primary factors influencing friendship development are physical proximity, task interdependence, work-related problems that either inhibit the friendship (e.g., a shared supervisor that frowns upon friendship) or facilitate the friendship (e.g., individuals that form a common bond over an issue), and, as will be discussed in detail later, organizational culture (Cahill & Sias, 1996; Sias, 2009). Analogous to proximity, network scholars argue that propinquity, or that individuals tend to interact with those closer in geographic or network proximity, predicts the presence of a friendship tie (Kadushin, 2012; Kono, Palmer, Friedland, & Zafonte, 1998). Additionally, Sias and Cahill's (1998) study of peer workplace friendships uncovered that factors external to the friendship and organization itself, for example, important events in each individual's personal life (including marital situations and health) and interactions such as socializing outside of the organization, influenced the extent to which workplace friendships deepened.

It is also worth noting, however, that physical proximity is not a necessary precursor nor influencer of deepening relationships. Indeed, other markers of proximity, such as psychological distance, may, in fact, be an even better deepener of friendship (Napier & Ferris, 1993; Wilson, Boyer O'Leary, Metiu, & Jett, 2008). This is particularly true as communication technologies make it increasingly easier and more affordable to feel like you are sitting with a colleague, even if that colleague is actually half-way around the world (Kolb, 2013; Wilson et al., 2008). As a result, the influence of context,

as mediated by virtual communication tools, likely also plays a role in friendship dynamics, though what the role is remains a black box in our collective knowledge.

When examining friendships over time, much of the existing work on their dynamics looks at the various stages that these relationships progress through. I will now turn to reviewing extant stage models of workplace friendship.

The stages of coworker friendship formation. The first lens of relationship formation models in organizations takes the relationship itself as the level of analysis, and assumes that a relationship between individuals is representative of the experience and behaviors of the individuals within it. Recently, Ferris et al. (2009) built on extant foundational relationship formation models (Dwyer, Schurr, & Oh, 1987; Graen & Uhl-bien, 1995; Kram, 1983) and offered an integrative, four-stage model of high-quality work relationship formation (a high-quality work relationship often breeds friendship; Colbert et al., 2016a). The first stage, "initial interaction," is guided by either norms of economic exchange (when the relationship is not voluntary for at least one partner) or social exchange (when the relationship is based on mutual attraction). In this stage, the authors note that the primary dimensions of the relationship include affect, instrumentality, and respect. The second stage, "development and expansion of roles," describes when individuals learn more about each other, and is additionally associated with trust and support. As the high-quality relationship develops, stage three, "expansion and commitment," is dominated by affect and a lessening of instrumentality as the individuals see the relationship as an end in itself. An additional dimension, flexibility, demarcates this third stage from the previous ones. And in the final stage, "increased interpersonal commitment," the authors (Ferris et al., 2009: 1390) argue that loyalty and

commitment to the relationship may even surpass the affect associated with the relationship as the individuals are reliant on each other for "continued social exchanges, support, and their shared relational identity (cf. Dwyer et al., 1987)."

In leader-follower friendships in particular, Boyd and Taylor (1998) bridged LMX formation processes with the social penetration theory of friendship formation (Altman & Taylor, 1973) to examine how leaders and followers develop friendships. Though status differences are inherent in leader-subordinate relationships, the authors theorized that such differences may be less of a deterrent in the initial stages of friendship formation when individuals perceive similarity between themselves along social dimensions (e.g., race, background). The friendship then moves to the exploration phase, during which the individuals are tentative and calculate the costs/benefits associated with the friendship. It is at this stage that value homophily (i.e., congruence in values) predicts the progression of friendship. Assuming that the benefits outweigh the costs for both the leader and subordinate, the next phase of friendship is characterized by a casual friend/medium LMX relationship. The final stage is that of close friend and high LMX, marked by a richness in communication and described as a "mature partnership" (p. 15).

Not all dyadic workplace relationships, obviously, progress through every stage of relationship development and most do not reach even cursory friendship levels. Kram and Isabella (1985), for example, found three types of coworker relationships, each progressively more intimate: information peer relationships, or those that are strictly information-sharing on work-related topics, collegial peer relationships, which combine elements of friendship and coworker roles (Sias, 2009), and special peer relationships, or "best friends," characterized by high levels of self-disclosure, intimacy, and trust.

Similarly, Sias and Cahill (1998) found that employee peer relationships moved from "acquaintance" to "friend," "friend" to "close friend," and "close friend" to "best friend." It is noteworthy that all of these friendship formation stage models assume that individuals interact as colleagues first and then a friendship emerges, rather than vice versa (cf. Grohsjean, Kober, & Zucchini, 2016). This is because individuals enter organizations as occupants of particular roles. It is these roles that set the stage for future interaction (Ashforth, 2000; Katz & Kahn, 1978).

Taken together, much work has focused on the formation of workplace friendships. Scholars have developed a variety of stage models, all of which converge on the fact that there are various levels of friendship and that each stage is associated with unique characteristics. However, these models of friendship were developed in co-located settings, signaling a need to look at these dynamics in virtual contexts.

Virtual Coworker Friendship

As noted, working virtually may foster unique relational dynamics. To date, though, we still have very little insight into what happens when friendship development at work undergoes "process virtualization," when a process that has typically been conceptualized as only occurring in the same physical space no longer involves physical interaction (Overby, 2008). And though a literature on virtual workplace friendships does not exist per se, there are glimmers of the implications on friendship of working from afar. In the early literature on virtual teams, scholars suggested that members of virtual teams will have to learn new ways of interacting and expressing themselves to others (Townsend et al., 1998). To be sure, relying on asynchronous communications (e.g., email, phone calls, text messages) makes it less easy to engage in spontaneous and "water

cooler" talk (Golden, 2006; Lin & Kwantes, 2015), suggesting that virtual workers may often feel isolated (Gainey, Kelley, & Hill, 1999; Golden et al., 2008; cf. Rockmann & Pratt, 2011). Interestingly, Gallup's recent (2013) survey found that co-located employees score higher than remote workers on the survey question, "I have a best friend at work," indicating that perhaps friendships occur at less intimate levels or not as frequently in virtual contexts. However, researchers in social psychology have found that individuals are generally just as satisfied with long-distance friends as they are with co-located friends, but that the tactics for maintaining these friendships differ (Johnson, 2001).

A primary goal of these maintenance tactics is to transcend the physical distance between friends by creating or maintaining *psychological* closeness (Johnson, 2001; Napier & Ferris, 1993). Rather than physical distance per se, it is the experience of feeling isolated from others that research suggests may most impact how interpersonal processes are experienced virtually (Bartel et al., 2012). The rise of easily accessible and richer forms of virtual communication may temper such feelings of physical isolation (Becker et al., 2009; Golden et al., 2008). Scholars have found that perceived proximity, rather than objective proximity, is more important to the quality of relationship formed and maintained through CMC than objective proximity, and that individuals may actually perceive greater nearness when they are objectively further from each other (O'Leary, Wilson, & Metiu, 2014; Wilson et al., 2008). Indeed, Walther's (1995: 199) work mentioned above suggests that "CMC provides an 'electronic water cooler,' where employees may both do 'job talk' and 'shoot the breeze,' conveniently, without having to leave their desks, and without risking the impression that they are not 'working.'" As a

result (and as noted earlier), telecommuting has more recently been meta-analytically found to have generally no effect on the quality of relationships at work – both between supervisors and subordinates and between coworkers (Gajendran & Harrison, 2007). Yet, due to the differences mentioned above, the phenomenology behind co-located and virtual friendships likely diverge from co-located friendships in terms of their formation, evolution, and maintenance.

To be sure, there is clearly reason to believe that these dynamics look and are experienced differently when organizational members have less frequent face-to-face contact. For example, because their communication is mediated largely from the onset of the relationship, virtual team members may receive and provide different information, such as less social information about themselves (Kiesler, Siegel, & McGuire, 1984; Sproull & Kiesler, 1986; Wilson et al., 2006). This may lead to increased difficulties establishing cohesion, conflict, trust, and access to knowledge (MacDuffie, 2007). Research has also found that individuals who rely on communication technology may experience higher levels of meaningfulness from their tasks when they are more reliant on electronic forms of communication, but that this relationship is attenuated by perceived co-presence (i.e., intimacy) with others (Gibson et al., 2011). And Sias et al. (2012) found that, for those not co-located, personality mattered less and shared tasks matter more for initial friendship formation than proximity.

Though we know a lot about the stages of coworker relationships at work, and we also know that coworker relationships often include friendship, previous research on coworker friendships has not inductively explored how these relationships are experienced and managed, particularly in virtual contexts. Virtuality in this case is not

merely a moderator – it likely creates an entirely different interpersonal experience at work (Bartel et al., 2012). Extant literature on coworker friendship in co-located settings therefore provides a useful, but incomplete basis for understanding virtual coworker friendships. Thus, the first research question posed is:

> *RQ1: How do the dynamics of virtual coworker friendship unfold over time, and what are the outcomes of virtual coworker friendships?*

Tension in Coworker Friendships

One dynamic in particular, the tension that underlies coworker friendships, has been acknowledged as present in workplace friendships, but understudied, especially empirically. Tension refers to the perceived friction between incompatible elements at two poles of a continuum that overshadows their potential synergy (Clegg, da Cunha, & Pina e Cunha, 2002; Lewis, 2000). Though the literature has tended to treat tension as both the perception of opposing elements underlying a phenomenon as well as what individuals experience as a result, I suggest that the stressor, the perception of tension, should be differentiated from the strain, or what individuals experience when the competing tensions are made salient (Rizzo, House, & Lirtzman, 1970; Sonnentag & Frese, 2003). Scholars have engaged various theoretical lenses (e.g., duality, dialectic, paradox) when studying the tensions that may exist in organizational life. As Smith and Lewis (2011) aptly describe, while each view provides a distinct frame for looking at how the various tensions in organizational life should be conceptualized and studied, they are actually complementary and may include elements of the other or blend into each other over time. Appendix B provides an overview of these various theoretical lenses.

Coworker friendship tensions. In a narrative review of business friendships, Ingram and Zou (2008) boiled down the challenges of maintaining a workplace friendship to threats to the self-concept, the exchange of incompatible resources (i.e., love and money), contrasting norms of reciprocity (i.e., economic exchange vs. communal), and incompatible network structures (i.e., closed structures are more conducive to affective relationships while open structures are more conducive to instrumental relationships). In the only direct empirical examination of the tensions arising from workplace friendship, Bridge and Baxter (1992) uncovered five dialectical tensions arising from workplace friendships. The authors contended that the source of these tensions was inter-role conflict due to the incompatibilities of the informal "friendship" and formal "work-role" facets of a workplace friendship (see also Morrison & Nolan, 2007). Since it is the most relevant study to date on this topic, I will dive deeper into their specific findings.

The first tension Bridge and Baxter (1992) found was that of impartiality vs. favoritism and refers to the contradiction between organizational norms that typically advocate maintaining objectivity and those of friendship that individuals treat each other as special. The second dialectical tension, closedness vs. openness, represented the expectation that work colleagues should have superficial relationships with the ability to maintain confidentiality from each other, while friends have high levels of self-disclosure and are expected to be honest and trusting with one another (Rawlins, 1983). The third tension was that of equality vs. inequality, which represents the contradiction between treating colleagues equally (Colquitt, Conlon, Wesson, Porter, & Ng, 2001; Goodman & Friedman, 1971) versus treating friends as unique. The fourth tension, connection vs.

autonomy, surfaced from interdependence dictated by the organizational context, which may, surprisingly, translate to excessive amounts of relating (i.e., connection) for friends. The final dialectical tension, judgment vs. acceptance, reflected that colleagues may have competing interests in their work roles and may find themselves in conflict, while friends are supposed to affirm and accept one another regardless of individual or contextual circumstances.

From their study, Bridge and Baxter (1992) distilled six ways in which the tensions outlined above lead to strain. In terms of how the working relationship may strain the friendship relationship, the authors found a coworker friendship strains: (1) the norm of egalitarianism in the friendship; (2) the norm of openness; (3) the norm of consensus or agreement in friendship; (4) the norm of acceptance when friends had to give coworkers negative feedback; (5) the amount of "space" or "distance" friends needed from each other; and (6) the extent to which individuals felt they could publicly display their relationship. They also found that the friendship, in turn, strained the work relationship in five distinct ways: (1) the subjectivity of friendship negated the objectivity of the working relationship; (2) the norms of equality associated with friendship made it hard to remain impartial when working together; (3) staying on task was more difficult as was managing the amount of help friends wanted to give; (4) friends reported feeling awkward when they had to conceal work-related information from their friend; and (5) perceptions of friendship made it harder in general to work together.

The authors also preliminarily explored factors they believed would impact the type and amount of tension experienced. Interestingly, the *type* of tension individuals experienced from the conflicting work and friendship roles was not influenced by the

hypothesized contextual factors, neither those external to the relationship (i.e., organizational formalization, work-group cohesion) nor those internal to the relationship (i.e., status differences between the relationship partners, closeness of the relationship). Related to the *amount* of tension that individuals experience, Bridge and Baxter (1992) revealed that individuals experienced less tension the closer the relationship was and more tension in more formalized organizations. However, neither work-group cohesion nor status differences predicted the amount of tension. As noted by the authors, though, the study suffered from serious limitations, including a low 25% return rate, a skewed sample that included only close, already long-lasting relationships, and the utilization of survey methodology that prevented "rich, detailed insight into the experience of dialectical tensions and how they are managed" (p. 220). Indeed, in contrast to Bridge and Baxter's initial findings, Sias et al. (2004) determined that status differences are an important influence on the health of the workplace friendship and that the promotion of one individual to a higher status may cause the relationship to deteriorate entirely.

So how does this discussion of tensions apply to coworker friends who work virtually? Research has found that individuals generally look for the same kind of relationship in terms of reciprocity (i.e., communal) from both geographically close and distant friendships, and that both types of friends are perceived as providing the same amount of social support (Weiner & Hannum, 2012). As a result, we might expect there to be a similar tension between the norms of the friendship relationship and those of the coworker relationship when individuals are not co-located. However, theory suggests that the form these tensions take may differ in a virtual setting. For example, the tension between connection and autonomy might be less salient because virtual workers are more

autonomous (Rockmann & Pratt, 2015). At the same time, the ways in which these tensions impact the coworker and friendship may look different. For instance, individuals may be not as concerned with feelings of public display because they are less frequently around coworkers at work, or they may experience "needing space" differently as more modern forms of communication (e.g., texting, FaceTiming) may make coworkers both more and less connected at the same time (Kolb, 2013).

As can be seen, although the existing research on tensions in organizational life in general and those in workplace friendships in particular provides a solid foundation for theorizing that tensions likely exist in coworker relationships, scholars have yet to fully unpack the impact of virtuality on how these tensions are experienced and managed over time. To be sure, our current understanding is largely based on work that looks only cross-sectionally at individuals who work face-to-face on a regular basis.

Managing Coworker Friendship Tensions

Not surprisingly, when tensions are made salient, individuals experience strain. This strain may take many forms. For example, individuals likely experience anxiety because their sense of self is threatened (Baumeister, Dale, & Sommer, 1998; Lewis, 2000). They may also experience dissonance, a discrepancy between thoughts and actions (Festinger, 1957) or the way one feels versus the way one "should" feel (Rafaeli & Sutton, 1987), when confronted with a situation that requires behaving, thinking, or feeling in a way that benefits the organizational (friendship) role to the detriment of the friendship (organizational) role. Regardless of the type of strain experienced, tension often leads to discomfort, prompting efforts to reduce it.

There is evidence that friendships at work – between individuals of the same organizational status (e.g., peers) and those of different status (e.g., supervisor and subordinate) – may deteriorate because individuals cannot manage the tension between being friends and belonging to the same organization (Bridge & Baxter, 1992; Sias et al., 2004). For example, in a qualitative study of the feminist organization, SAFE, Ashcraft (2000) found that as SAFE encouraged the blending of personal and professional relationships, individuals developed more intimate connections but simultaneously became skeptical of these connections. They described feeling the need to keep "clean relationships" between supervisors and subordinates and maintain a little "distance" in order to avoid the "weirdnesses" that come with being friends in the same organization. When workplace friendship tensions are not managed, the friendship may deteriorate or terminate altogether. Sias et al. (2004) found that, in addition to losing an important source of instrumental and emotional support, individuals who experienced the loss of a friend at work suffered negative spillover effects on their task performance. In order to avoid such detrimental consequences, research suggests that individuals engage in various maintenance tactics to sustain their workplace friendships (Sias, Gallagher, Kopaneva, & Pedersen, 2011). Berman et al. (2002) found that organizations may recognize this potential challenge with workplace friendships, training individuals on the "dangers" of workplace friendships as well as management strategies.

Tension management strategies. Bridge and Baxter (1992) hypothesized that coworker friends utilize three strategies initially formulated by Baxter (1988), namely selection (i.e., giving priority to the work [friend] role over the friend [work] role), separation (i.e., isolating the two roles), and integration (i.e., simultaneously fulfilling

both roles so that they are no longer competing). In their study, though, integration was not found to be a significant management technique. Similarly, in examining the duality of competition in friendships, Zou and Ingram (2013) followed Zelizer's (2005) typology of responses to tension and found that individuals most commonly followed either the "separate worlds" logic, denying being competitive with friends, or that of "negotiated integration," accepting the friendship and competition, and directly communicating with the competitor-friend. They suggested that the third type of logic, seamless integration, was rarely, if ever, used (see also Ingram & Zou, 2008). The authors ultimately determined that those who recognized the duality were perceived to perform better at work, and suggested that accepting the duality was the most functional response. Sias et al. (2004) similarly found that individuals had a difficult time enacting the separation and selection strategies that Bridge and Baxter's (1992) study revealed. Instead, the authors discovered that when individuals acknowledged and agreed on how to manage the tensions, the relationship was less likely to deteriorate.

Scholars across various theoretical disciplines have suggested similar tactics for managing tensions. Lewis (2000), building on work from Smith and Berg (1987) and Vince and Broussine (1996), differentiated paralyzing defenses, or defense tactics that initially ameliorate the tension and discomfort but ultimately amplify the tensions (e.g., denial, repression), from functional tactics that endeavor to manage the paradox by capitalizing on its potential energy, insights, and power (e.g., acceptance, transcendence). Similar distinctions have been made between defense and coping mechanisms (e.g., Ashforth et al., 2014) and problem-focused and emotion-focused coping (Lazarus &

Folkman, 1984). Table 1 provides a summary of the tactics that the literature suggests individuals employ in managing their workplace friendships.

Given the potentially detrimental consequences for workplace friendships and, by extension, workplace relationships more generally, it is crucial that we have a solid understanding of the dynamics of coworker friendship tensions. However, all our insight into tensions is either theoretical or empirically derived from contexts in which individuals are largely assumed to work face-to-face. So how, if at all, does virtuality change the way that these tensions are managed? As individuals work through these challenges to their friendships via CMC, do they invoke the same management tactics? Do those tactics considered paralyzing in "traditional" contexts similarly lead to deleterious consequences in virtual organizations? Because of these many unexplored questions, my dissertation also asks:

> *RQ2: How, if at all, are virtual coworker friendship tensions experienced and managed over time, and with what effects?*

As can be seen, there is much to be learned regarding workplace friendships in general and tensions more specifically, particularly when individuals work virtually. A richer, more dynamic understanding of friendships will provide insight into relational life in organizations, the "connective tissue" between individuals at work (Dutton & Heaphy, 2003). Through the present inductive study, we can begin to understand, from the perspective of those embedded in these virtual friendships, how these relationships form, how their underlying tensions are experienced and managed over time, and with what consequences (Corley, 2015).

CHAPTER 3

RESEARCH METHOD

In this section, I will detail my design for this study, including the context in which I collected data, as well as the methods employed for data collection and analysis.

Overview of Context

Because the phenomenon of interest is virtual workplace friendship, it was important that I find a context where friendships bloom between employees who are geographically dispersed. Data collection for this study took place in the Central Division (Midwest) office of "Cloudly" (a pseudonym), a global technology corporation headquartered in the Northeast. The company has over 70,000 employees worldwide, with approximately 900 based in the Midwest. Cloudly is committed to creating a culture of collaboration and has received a number of internally-focused awards, including being named a "Great Place to Work[3]" across multiple countries. All employees of Cloudly's Midwest-based offices work on geographically dispersed teams and have the option to telecommute. While some are purely virtual (spending 100% of their time away from the office), the majority of Cloudly employees that report to the Midwest field offices are members of "hybrid" virtual teams such that they may have the opportunity to interact in-person on a semi-regular basis[4].

[3] See *https://www.greatplacetowork.com/best-workplaces* for more information.

[4] Informants noted that the extent to which they interacted in-person varied from week-to-week (those most likely to come into the office), month-to-month (depending on how often their team got together in person), or on an annual basis (those who worked in a different country or were allocated 100% in the field and only had face-to-face contact with coworkers during large, annual organizational meetings). This is in line with scholarly research suggesting that most virtual teams are likely to be hybrid (rather than pure virtual or traditional face-to-face), varying

For individuals who wish to work in an office, the company provides hoteling space in office locations throughout the Midwest (e.g., Chicago, Illinois, St. Louis, Missouri, and Columbus, Ohio). Managers have private offices, and all employees have access to private meeting and conference rooms. Key informants in Human Resources (HR) cited the turnover rate as approximately 8%. This compares very favorably with the national average for the information industry of approximately 30%[5]. HR also noted that the average tenure in one of the groups studied (the customer service group) is 15 years, suggesting that there is ample time for individuals to forge and maintain friendships at Cloudly.

Informants were drawn from the sales (both "mid-market," which specializes in small and medium-sized sales, and "enterprise," which tends to take on larger sales projects) and customer service divisions. Within these divisions, individuals were located on teams of approximately 5-7 people. Team members were somewhat interdependent, especially in the sales department, where, in addition to individual rewards, teams were often rewarded and recognized as a unit. Sales and customer service teams were also account focused; various individuals often worked together to support clients and to build sales campaigns. Across both divisions, teams held weekly meetings, typically on Mondays. In the customer service division, these meetings were primarily held virtually through a conference call. In the sales organization, meetings were usually held in-person at the company's office, with dispersed members of the team calling in via phone. Those

regularly on the extent to which individuals rely on CMC or are geographically dispersed (Fiol & O'Connor, 2005; Griffith et al., 2003; Mathieu, Maynard, Rapp, & Gilson, 2008).

[5] Bureau of Labor Statistics Annual 2014 Turnover Rate for the Information Industry. See *http://www.bls.gov/jlt/*.

in the customer service organization tended to see each other outside of the office as they traveled to customer sites together. Those in the sales division tended to see each other more regularly in the office. For those who lived too far away to attend meetings, each team held a Quarterly Business Review (QBR), during which some (but not all) members of the organization would join in person to review the team's progress towards its goals and share best practices with one another. These meetings typically consisted of a business component in the morning and a social gathering (e.g., outing, volunteer experience) later in the day. Over time, however, informants noted that in-person meetings with dispersed members of their team have become fewer and farther between. When not co-located, individuals have access to email and phone calls, but rely heavily on an internal instant messaging system and WebEx (an online conferencing website that informants used to share their computer screens with collaborators). Although Cloudly had applications that support video conferencing, participants noted that they rarely, if ever, used it. Informants provided two rationales for this: (1) no one wanted to be caught off-guard in their pajamas, and (2) informants spent a lot of time on the road (called "*windshield time*"; NH17_2), during which video conferencing was unsafe. As a result, they described video conferencing tools, like Skype or FaceTime, as counter-normative to Cloudly's culture.

Overview of Grounded Theory

The nature of my research questions suggested that a grounded theory method was most applicable for this study (Charmaz, 2006; Strauss & Corbin, 1998). Grounded theory is a methodology aimed at "fresh understandings about patterned relationships between social actors and how these relationships and interactions actively construct

reality (Glaser & Strauss, 1967)" (Suddaby, 2006: 636). It is well-suited for questions that seek to explain how a phenomenon or process works (Langley, 1999; Suddaby, 2006), such as those in this study. The method "consists of systematic, yet flexible guidelines for collecting and analyzing qualitative data to construct theories 'grounded' in the data themselves" (Charmaz, 2006: 2). The fundamental components of grounded theory are: (1) theoretical sampling; (2) inductive coding; (3) constant comparison, (4) theoretical saturation; and (5) theoretical sensitivity (O'Reilly, Paper, & Marx, 2012), all discussed below.

Data Collection Process

The data collection process, including the types of data and the sources from which the data are collected, is a crucial part of building grounded theory. Data collection should be aimed at gathering "rich" data (Geertz, 1973), or data that "reveal participants' views, feelings, intentions, and actions as well the context and structures of their lives" (Charmaz, 2006: 14). I collected multiple sources of data in order to holistically understand how my informants experience and manage their coworker friendships and the tensions embedded within them, as well as to ensure the trustworthiness of my emergent theory (as described later) (Lincoln & Guba, 1985; Marshall & Rossman, 2006). Because my primary type of data involved semi-structured interviews, I will first describe who I interviewed.

Primary source of data: Semi-structured interviews. My principal source of data included open-ended, semi-structured interviews. In total, I completed 115 interviews. Interviews ranged from 18-86 minutes, with the average interview lasting approximately 40 minutes.

Sampling. My initial sampling strategy included conversations with key informants in HR at my data site, as they had a very good sense of the interpersonal workings of the organization. Based on prior conversations with these individuals, I identified that I would draw my participants from the sales and customer service divisions of Cloudly because these were the two areas of the company identified as geographically dispersed, friendly, and in which team-based interdependencies existed.

My design aimed to capture the dynamics of friendships and their tensions at various stages of the coworker friendship relationship. Accordingly, I had two distinct samples in my study. The first was a sample of "transitioning" employees, or those who were either newly hired or transitioning internally to a new role. I interviewed a total of 16 new hires and 12 internal transitioners at three points in time each[6]. Because these individuals were just forging relationships with their new coworkers (some of which blossomed into friendships), studying them over time allowed me to understand the dynamics of coworker friendships from their start. While Cloudly did not have a formal training program for newcomers entering their Midwest field office, new hires (including promotions and lateral transfers) started every Monday. Every individual hired into the customer service and sales areas of the Midwest office during my time of data collection was, to my knowledge, invited to participate in the study through either a formal email from me or from an administrative assistant at Cloudly. In addition to the sample of transitioning informants, I also had a pool of 36 "experienced hire" informants, for a total

[6] One role transition informant never responded to requests for the second and third interviews, and two new hires similarly never responded for round 3 interviews. I had a total of 28 round 1 interviews, 27 round 2 interviews, and 25 round 3 interviews.

sample size of 64. Experienced hires were first selected based on conversations with key informants in HR at Cloudly. I subsequently employed snowball sampling whereby existing informants recommend future informants based on their understanding of the phenomenon of interest. The average tenure for experienced hires was 7.4 years. Of the total sample, 25% of new hires, 50% of role transitioners, and 18% of experienced hires were formal supervisors. Females comprised 7% of new hires, 9% of role transitioners and 30% of the sample of experienced hires[7]. As previously mentioned, informants in my sample were considered "high intensity" telecommuters (Gajendran & Harrison, 2007). As noted, virtuality can be defined in a number of ways (Bell & Kozlowski, 2002; Gibson & Gibbs, 2006; Gilson et al., 2015; Kirkman & Mathieu, 2005). "High intensity" in my study referred to working physically away from coworkers at least 50% of working hours and relying heavily on CMC to communicate with coworkers (likely far more than 50% of the time)[8]. On average, new hires cited their percentage of virtuality around 60%, role transitioners around 62%, and experienced hires around 67%[9]. In order to determine this, I asked every potential informant what percentage of the time they spent working virtually, and those who fit my definition of "high intensity" were included in my sample. Participation in the study was voluntary and individuals did not receive any incentive or

[7] The average percentage of females in the total IT industry is approximately 30% (Bureau of Labor Statistics, 2016).

[8] This is consistent with scholars' definition of "hybrid" virtual teams, the most common virtual work arrangement (Fiol & O'Connor, 2005; Griffith et al., 2003).

[9] Informants often qualified these estimates by saying that they are hard to calculate and highly variable. For example, they might stop by the office for an hour on their way to a customer site, but would count that as a day in the office.

compensation for joining the study. I also received approval from the Institutional Review Board at ASU.

To capture the dynamics of friendship over time, I employed a longitudinal study design. Ashforth (2012: 178–179) recently argued that the most commonly used time intervals for studying socialization (i.e., 3 months, 6 months, 9 months, and 1 year; Bauer, Bodner, Erdogan, Truxillo, & Tucker, 2007; Bauer & Green, 1998) have no real theoretical basis. Rather, scholars should assess the baseline of what they are interested in as soon as possible and then rely on key informants for understanding when to next measure a change in the phenomenon of interest. Research indicates that close friendships tend to form within six weeks (Hays, 1985), leaders and followers often form differentiated relationships within eight weeks (Nahrgang et al., 2009), and friendships may deteriorate within a year (Sias et al., 2004), all of which suggests that these dynamics may unfold quickly. Further, because new hires most often did not go through a formal training period outside of their teams[10], I deduced that lags in prior research at the intersection between friendship and socialization that accounted for formal socialization prior to joining a team were not appropriate for this study (e.g., Morrison, 2002).

My initial plan was to interview the longitudinal informants at six weeks, 12 weeks, and 24 weeks. However, it became apparent within the first few interviews conducted with new hires and internal role transitioners that friendship dynamics were unraveling more slowly, likely because these relationships were largely mediated by communication technologies (Wilson et al., 2006). I subsequently revised my sampling

[10] A few individuals in my sample participated in a training program in Boston for up to three months. The training program included employees who held the same role but were located all over the world.

strategy to best capture my phenomenon of interest (Corbin & Strauss, 1990). I conducted time 1 interviews within 3 – 6 months of hire, time 2 interviews 7.5 – 8.5 months after hire (approximately 6 weeks after time 1), and time 3 interviews 9 months – 1 year after hire (approximately 6 months after time 1).

A repeated measure, longitudinal design enabled me to capture the dynamics of friendships and their tensions. In studying individuals over time, I was able to observe how the phenomena were experienced differently at one point in time versus another (Ployhart & Vandenberg, 2010; Singer & Willett, 2003). Because I believed these dynamics formed and changed at a rapid pace during friendship formation, my first two proposed time periods were quite close together toward the start of individuals' transition into their new role. As the virtual coworker friendships began to solidify and the relational partners begin working through ways of understanding and managing the tensions, these dynamics became more stable, providing the rationale for unequally spacing the third interview into the future. Recent empirical work on socialization proposes that distinct inflections in the level of organizational commitment loosely map onto the time periods at which I interviewed new hires and internal role transitioners, signifying that there are, indeed, fundamental shifts in individuals' experience of organizations at these time periods (Solinger, van Olffen, Roe, & Hofmans, 2013). As briefly mentioned, my sample also included tenured employees, who I largely interviewed once each[11]. I relied heavily on these individuals for two reasons: (1) they

[11] A few tenured employees were asked for short follow-up interviews when it was clear that something in the future might alter their experience of one of their friendships and/or its underlying tensions. These short follow-ups are not included in my formal interview count.

had more experience with coworker relationships at Cloudly, and (2) they provided me with a better understanding of my context – a historical grounding of sorts.

Ashforth (2012), drawing on Ancona and colleagues (2001), recommended that "event time," or discrete episodes, should be differentiated from "clock time," which considers time as a linear continuum, in studying newcomer socialization. As is the case in my context, Ashforth argued that the more unpredictable socialization events are, the more useful event time (over clock time) is in studying a phenomenon. My interview protocol was largely designed to evoke discrete events that change the nature of how friendships and their tensions are experienced. This was based on previous friendship research focused on event time (e.g., Morrison & Nolan, 2009; Sias & Cahill, 1998), along with theoretical work that suggests that relationships may change from reciprocity-based to non-reciprocity based through events (Ballinger & Rockmann, 2010), and the likelihood that time is socially constructed and experienced differently across friendships (Ancona et al., 2001). Appendices B-D provide the final interview protocols from each sample I interviewed.

As a tenet of grounded theory, I followed the guidelines of theoretical sampling, or sampling based on where the phenomenon and data exist. Theoretical sampling guides a researcher on where to collect data next and facilitates the development of the emerging theory (Charmaz, 2006; Glaser & Strauss, 1967). As friendship formation became a more important and salient theme in my interviews, my protocol began to shift to focus on topics relevant to friendship formation. Moreover, as particular aspects of formation emerged (e.g., imagination, relational digital fluency), I began asking more targeted questions about these topics in an effort to better understand their nuances.

Further, friendship is a subjective concept, existing on a fine-grained continuum (Ferris et al., 2009; Sias & Cahill, 1998). It became clear that individuals often blended the types of relationships they described during interviews, seamlessly transitioning between stories about acquaintances and those about actual coworker friends. To ensure that my focus remained on coworker friendships, I was very mindful to ask informants how they define coworker friendship, how it differs from other types of relationships in the workplace and friendship outside of the workplace, and frequently asked follow-up questions like, "would you consider this person a friend?" Similarly, because informants were largely members of "hybrid" virtual teams, their coworker friendships most often blended in-person dynamics with virtual ones. In order to further tease out these dynamics, I frequently asked informants to specify how often they interacted with a particular coworker friend in-person, to focus their answers on coworker friends with whom they had little to no regular in-person contact with, and to elaborate on the differences between a primarily virtual vs. a face-to-face coworker friendship.

Because the first interview for newcomers was almost immediately after they started with the organization, informants often spoke of not having had enough time to develop a friend or to experience virtual coworker friendship tensions. In these early interviews, I often shifted the focus from "friends" per se to a discussion on "friendly" relationships more generally (Kurth, 1970). I also had them reflect on past experiences of coworker friendship and compare previous workplace contexts with Cloudly. Since a focus on workplace friendship tensions is potentially uncomfortable, I paid special attention to informants' comfort level. For example, I endeavored to validate their experiences and end the interviews on a positive note (Charmaz, 2006). All interviews

were transcribed verbatim, either by me or, most often, by a professional transcribing service. Upon confirmation of transcription, the data were "scrubbed" and all identifying information was removed (as per IRB regulations).

Additional sources of data: Observation. To fully understand the organizational context and my informants (and for my informants to better understand me as a researcher), I also observed how the individuals in my sample interacted with each other. In total, I spent more than 75 hours observing my context and informants. Observation included sitting at a hoteling cubicle and working alongside those in the office, attending a two-day QBR and the subsequent social event, observing an annual sales kick-off meeting, among other events. I also met somewhat regularly with my HR contacts to gain a better understanding of what was occurring at the company during my data collection (e.g., holiday toy drives, corporate volunteering days, large-scale meetings). Observing in-person dynamics helped shed light on how individuals build and maintain friendships when transitioning between mostly virtual to in-person. For example, in an entry from my field journal of a QBR observation, I noted, "I think one of the things that struck me most was the change in interpersonal patterns between day one and day two. Many of these people have worked together for years in various capacities. On day one, however, there was very little water cooler talk, very little voluntary interaction. By day two, the tone in the room shifted dramatically…A key takeaway is that it takes time to re-orient to being in person. Even if people keep in touch online, it's different."

Additional sources of data: Archival materials. Because Cloudly was a publicly-held company, I was able to learn a lot about the company through its website and news outlets. HR also granted me access to relevant archival materials, such as policies and

statements related to the social context at work and materials from QBRs and other meetings that might be relevant. Informants also shared archival materials that were important to them and relevant to the study, such as a slide deck on how one informant proposed to enhance the relational culture of his team, a video that an intern had created on why Cloudly was such a great place to work, and photos of team gatherings from team gatherings.

Data Analysis

Coding data is the primary analysis process in a grounded theory project. Coding involves labeling segments of data with a name that represents what a segment means, creating the "bones of [my] analysis" (Charmaz, 2006: 45). Because qualitative projects can yield an overwhelming amount of data (Gioia, Corley, & Hamilton, 2012), coding helped me understand and make sense of all of the data, eventually moving from raw data to categories to themes at a higher level of theoretical abstraction (Miles & Huberman, 1994). I began the project using NVivo 10, a well-known software for qualitative data management and analysis, upgrading to version 11 of the software about halfway through. As I will also expand on below when I discuss trustworthiness, I often engaged the members of my dissertation committee throughout the process to confirm that the emerging theory and my process (i.e., data collection and analysis) remained true to the tenets of grounded theory.

Coding order. To discern meaningful differences in how virtual coworker friendships were formed and tensions experienced over time, I began coding transcripts within the various timeframes of the longitudinal interviews (e.g., I coded interviews at time 1 before those at time 2). Realizing, however, that there were interesting and

meaningful patterns across interviews for each informant, once I had completed the final interview with transitioning employees, I analyzed data within individuals (i.e., new hire interview #1, 2, and 3; internal role transitioner interview #1, 2, 3). Throughout the analysis of my longitudinal data, I compared these findings in relation to the way these very same dynamics were unfolding retrospectively in the *experienced* hires' interviews and found that no meaningful differences were articulated in the formation process and experience of tensions. Given that the extent of virtuality played a huge role in these dynamics, I also analyzed data on the basis of how virtual informants were, often comparing my analysis of interviews with less virtual employees to those who considered themselves to be more virtual.

Constant comparison. Perhaps most important to the emergence of a theory grounded in the data, I also engaged in constant comparison (Glaser & Strauss, 1967; Locke, 2001; Suddaby, 2006). Constant comparison involves iterating between existing data, new data, and the emerging theory, asking questions such as "What is this?" and "How does it relate to that?" as new data emerges (Strauss & Corbin, 1998). The constant interplay between the emerging theory and collection of data helped embed my emerging theory of virtual coworker friendships and their tensions in the data.

Open coding. The first stage of coding is often referred to as open coding (Glaser & Strauss, 1967), or creating first-order (Pratt, 2009; e.g., Nag, Corley, & Gioia, 2007) or initial codes (Charmaz, 2006). In this stage, I labelled anything that was potentially relevant to my research questions (e.g., friendship, tension). As I continued to identify concepts through this first stage of coding, I also began more focused coding, selectively coding for concepts of particular relevance or importance. This process is often guided by

the most critical or frequently used codes (Charmaz, 2006). In this stage, codes were directly tied to the data and often included as *in-vivo* codes, or codes comprised of language used by my informants that best capture individuals' experiences and assumptions in a way that I cannot as an outsider (Van Maanen, 1979). Examples of first order codes are "picturing someone," "having fun," and "seeing similarity." This stage of coding also highlighted the data that I was missing to fully understand my emerging theory, often prompting refinement of my interview protocol.

Axial coding. Open (and more focused) coding captures first-order data, signifying concepts that are rooted in informants' experiences, or, as Charmaz (2006: 45) described, the "bones" of grounded theory analysis. The next step in coding, axial coding, takes the "bones" established during open coding and identifies relationships between them, thus allowing me to begin assembling a working "skeleton" (Charmaz, 2006; Strauss & Corbin, 1998). For example, I viewed the open codes "picturing someone" and "judging voice" as types of the axial code "imagination." Though open and axial coding are presented as different stages of coding, the separation is "artificial" as the two often occur hand-in-hand (Strauss & Corbin, 1998: 198). Axial coding helped clarify the relationships between codes. In the spirit of constant comparison, once I established preliminary categories, I returned to data collection to theoretically sample and flesh out the details of the emergent relationships until no new properties emerged (i.e., a theoretically saturated category) (Glaser & Strauss, 1967).

Moving to theory. The final stage of analysis was integrating themes identified during axial coding to "tell an analytic story that has coherence" (Charmaz, 2006: 63). In this stage I deeply engaged with extant literature while remaining attuned to the fact that

the emerging theory needed to stay grounded in the data themselves. Continuing with the example of body language above, in this stage I drew on the theories of communication that highlight the importance of establishing social presence in virtual interactions to identify "presence bridgers" as a broader, theoretical understanding of the ways in which individuals convey social presence.

Additional sources of analysis: Field notes and memos. Throughout data collection, I kept a journal of field notes. Every time I would observe a meeting or sit in a cubicle for the day, I would articulate my thoughts in real-time. If I did not have time to take notes while observing, I would write notes soon after my observation. Field notes allowed me to capture my thoughts promptly, reducing retrospective bias both in the data described as well as in my own thoughts of how the emerging theory was reflected in my observations. In addition to field notes, I also wrote memos as I coded data. There are no prescriptions for memo-writing; style is based on personal preference (Charmaz, 2006). I wrote all of my memos in narrative form, and often included direct quotes from informants to help illustrate how the emergent themes were intimately tied to collected data. As a sensemaking tool, constructing memos triggered insights and exposed patterns in the data that were hard to discern otherwise, often sparking the basis for theoretical sampling decisions. I also shared a few memos with members of my dissertation committee to ensure that others could understand my interpretation of the data. Memos ranged from half a page to three pages long.

Theoretical saturation. I ended the concurrent processes of data collection and analysis when I reached theoretical saturation, or the point when no new properties of the emergent categories were gleaned from data collection and analysis (Glaser & Strauss,

1967). Because I studied individuals over time, it was imperative to continue interviews through time 3 to ensure that saturation was achieved for all aspects of my emergent theorizing.

Theoretical sensitivity. Lastly, a fundamental component of building a theory steeped in the data collected and true to the experiences of those living the phenomenon is the notion of theoretical sensitivity. Theoretical sensitivity calls for creativity based on the researcher's experience with the data and encourages an open mind, allowing the data to speak to the emerging theory, rather than applying a preconceived theoretical notion (Glaser, 1978; Glaser & Strauss, 1967). Throughout the data collection and analysis processes, I tried my best to be mindful and not allow extant literature to sway my thinking into testing hypotheses I have consciously or unconsciously formulated based on my extant knowledge of workplace friendships (Charmaz, 2006; Suddaby, 2006). To aid me in maintaining theoretically sensitivity, I often had conversations with my committee and also constructed a memo based on my own experiences and how they related to my emerging theory.

Trustworthiness

In inductive research in general and grounded theory research in particular, the notion of validity and reliability are not applied in the same way as in deductive research. Indeed, Lincoln and Guba (1985: 290) detailed techniques for grounded theorists to ensure the "trustworthiness" of qualitative research (see also Shah & Corley, 2006). The authors outlined four criteria: credibility, transferability, dependability, and confirmability. Here I detail how I addressed each in my study.

Credibility. Credibility in inductive research is analogous to internal validity (i.e., ensuring that inferences about causality are valid) in deductive research. In inductive research, however, credibility relates to carrying out the study (and analysis) in a way that ensures the emerging theory's groundedness in the lived experiences of my informants. In order to ensure the credibility of my study, I took the steps initially described by Lincoln and Guba (1985) and later explicated by Shah and Corley (2006). First, I engaged in the field for an extended period of time – approximately a year and a half. I also engaged multiple types of data, particularly interviews, observation, and archival data, aiding in the triangulation of the emerging theory. Additionally, as noted, I conducted member checks with key informants (those interviewed as well as key informants throughout the company, such as my HR contacts), and engaged in peer debriefing with members of my dissertation committee and others in the field. Such informal conversations further ensure that my findings accurately reflect how my informants experienced their friendships and the possible underlying tensions that come with being workplace friends.

Transferability. Transferability in inductive research is analogous to external validity in deductive research. However, inductive research is inherently context-specific (Lincoln & Guba, 1985). As a result, transferability in inductive research is instead concerned with grounding the emerging theory in the data, such that a non-context specific understanding of the phenomenon occurs, capturing the fundamental experience of those living the phenomenon. As outlined above, the methods I used to ground the emerging theory in my data (i.e., my coding process, constant comparison, and theoretical sampling) speak to how I addressed transferability. Further, by recognizing

the characteristics of my context, such as the hybrid nature of virtuality in the organization, I can better infer how my emerging theory transfers to other contexts. As I highlight in the "Discussion" section, these characteristics suggest potential limitations with transferability worthy of considering.

Dependability. In inductive research, dependability, or making sure the emerging theory remains confidential and grounded in the data, replaces traditional notions of reliability in deductive research, or the extent to which a construct is measured in the same way over time (Lincoln & Guba, 1985; Shah & Corley, 2006). To ensure dependability, I engaged in theoretical sampling (described previously), kept a proper trail of my data (both in the data management and subsequent analyses), and maintained all informants' confidentiality. I also received approval from the Institutional Review Board process at ASU, as well as the legal department at Cloudly, both of which required very detailed explanations of how I planned to manage and analyze my data in a dependable manner.

Confirmability. Confirmability in inductive research is suggestive of objectivity in deductive research, or remaining impartial to findings. To some extent, it is not possible for a researcher to remain completely impartial while conducting a grounded theory study, as every individual brings his/her background to the research table (Charmaz, 2006). However, I took the precautions offered by Lincoln and Guba (1985) in order to minimize any potential bias. Like the criteria of dependability, an audit trail of data was essential for confirmability. This included separating the codes I apply (i.e., open and axial codes) by starting a new NVivo file, transcribing interviews verbatim (As noted, interviews were both transcribed verbatim by me as well as professionally transcribed.

All data were scrubbed for identifying information.), and making detailed notes of any methodological decisions I made along the way. In total, these steps helped ensure that the emergent theory of coworker friendship formation and tensions was properly grounded in the data I collected.

CHAPTER 4

FINDINGS

In this section, I will present the results of my data collection and analysis, organized by research question.

RQ1: The Virtual Coworker Friendship Formation Process

The first research question posed, "how do the dynamics of virtual coworker friendship unfold over time, and what are the outcomes of virtual coworker friendship?" What emerged through my analysis was that the virtual coworker friendship *formation* process in particular was a dynamic worthy of deeper investigation. Friendship formation first caught my attention during the second round of interviews, when two new hires, both of whom had the desire to make friends and had been in the organization for approximately the same amount of time, described drastically different outcomes and experiences in forging these relationships at Cloudly. The first individual, who was quite successful in building coworker friendships, spoke of how she took advantage of personalizing relationships in online interactions:

> *Forming good friendships…I don't start out every phone call or every email with getting to the point. We have our personal discussion first like, "hey, what did you do last weekend?" Or, "I know your daughter was sick. How is she feeling?"…we know what's going on in each other's lives. That adds a nice personal element to it and it's all good.* (NH13_2)[12]

[12] I will use "NH" to denote new hire, "EH" to denote experienced hire, and "RT" to denote role transitioner. Following the new hire and role transitioner individual identifiers, I will specify the interview in which the quote occurred. For example, NH13_2 signifies new hire individual #13's second interview.

On the other hand, the second individual appeared unable to navigate the world of virtual coworker friendships, noting:

> *I just haven't [made friendships]. I haven't quite figured it out yet… I mean, because one of the things is some of these other guys are really busy and so sort of feeling you feel like you're intruding when you do reach out.* (NH12_2)

In short, both had the desire to form virtual coworker friendships, but only one did. Why, then, were the first individual's efforts rewarded and the second's not? This prompted me to delve further into the formation process and ask, "How do virtual coworker friendships form over time?" What began to crystallize was that, in order to form virtual coworker friendships, individuals must forge and organizations must cultivate relationships differently than when employees are primarily co-located in a brick-and-mortar building:

> *Earlier on in my career…when you needed to meet, everybody got together in a room or met somewhere and over time that has changed dramatically in terms that there's lot less of that. So you learn to foster relationships through different means of communication than the face to face that used to be a lot more prevalent than it is today*. (NH18_1)

This difference was a function of what many informants described as the "*barrier*" (NH7_1) of virtuality, which, as one informant expressed, made it more challenging to get to know coworkers personally:

> *When you go out for beers with somebody, you take things farther than you would on the phone or on any sort of virtual communication device. [In virtual contexts] you're not going to have as much fun; you're not going to learn as much about the person. You might have certain borders up and those all can go down like in the comfort of…two buddies getting a beer*. (EH16)

As a result, individuals noted that, "*in a work atmosphere with the virtual environment the one thing I would say is you don't have as intimate, if you will, a relationship with your co-workers as maybe you did in the past…I think there's kind of a*

little bit of a lull there knowing the level of separation" (NH18_1), and "*just by the nature of being more virtual you have less camaraderie; you have less lunches together; you have less happy hours together; you have less information in conversation sharing, and you end up being not as close as when you're in person*" (RT10_1). One informant even went so far as to say that virtuality is the factor that has most impacted coworker friendship formation over his career:

> *The virtual work force has changed [coworker friendship] probably more than anything else. I lived in a neighborhood near one of the places I worked and there were people in the neighborhood that worked for the same company. And so it was easy to build personal relationships with those guys because all of the kids had the same interests, went to the same school. It was just a simple thing to do, I think.* (NH5_1)

The genesis of this barrier comes from the largely decreased[13] access to two of the chief, traditional facilitators of friendship in a co-located workplace, namely proximity – "*Like you can't go down and walk down the hallway and grab a cup of coffee with the person and just chit-chat*" (EH4) and, as NH18 noted above, extra-organizational socializing. Without both contexts of face-to-face interaction, virtuality created a sense of physical and psychological distance that most of my informants perceived as a hindrance to forming friends at work. Yet, in my sample and in extant literature (Sias et al., 2012), virtual coworker friendships were not only possible, they were prevalent. As one informant noted, when you do make a virtual friend at work, "*The distance…It made those times when we were talking about things at a personal level, I think, a little more special when they actually did happen*" (NH22_1). So how, then, do organizational

[13] As noted, informants in my sample were members of hybrid virtual teams. While they did have opportunities to interact face-to-face, such instances were far rarer than for those in a co-located workplace.

members get to know each other in voluntary and personalized ways, given far fewer opportunities to be physically near one another in both formal and informal settings?

As noted previously, communicating virtually made it much more challenging to interpret various social context cues: "*I'll call it the intangible. It's the smile, it's the way the person presents themselves…is the person genuine about what they're doing? All that stuff that you can physically see versus virtually*" (EH22). Further, virtual workplace friendships are largely formed based on work interdependence (Sias et al., 2011), and employees in virtual contexts often lack the casual contexts in which friendships are typically formed: "*When you're in an office setting, you can have that water-cooler effect where it's a little bit more social*" (NH17_1). It consequently also became much more challenging for informants to create informal relationships, like friendships, that transcend the work. To combat these obstacles, my data suggest that those who were successful in establishing virtual coworker friendships demonstrated three distinct facilitators unique to the virtual context: two of which are specific sets of behaviors and the third is a set of competencies. The first set of behaviors, which I have termed "presence bridgers," encompasses activities aimed at filling in the "social presence" (defined previously as, "the feeling one has that other persons are involved in a communication exchange," Walther, 1995: 188) gap that a heavy reliance on CMC creates. The second, which captures activities aimed at building a relationship that goes beyond a task-focused coworker relationship (cf. Sias et al., 2011), I have termed "virtual relational informalizers." Third, my data also suggest that individuals exhibited what I have termed "relational digital fluency," defined as an individual's proficiency and comfort in utilizing virtual communication media to build and maintain personalized

coworker relationships (cf. Briggs & Makice, 2012; Colbert et al., 2016b). Table 2 provides definitions of the virtual coworker friendship facilitators along with illustrative quotes.

As a fundamental part of the virtual coworker friendship formation process, and as depicted in Figure 1, these facilitators played a central role in transitioning a coworker relationship from mere acquaintances to full-blown friends. Indeed, the data suggest that those who forged virtual coworker friendships employed presence bridgers and relational informalizers, while also displaying relational digital fluency. In short, each of these facilitators is necessary but not sufficient on their own to traverse the barrier of virtuality and reach the level of intimacy that defines virtual coworker friendship. I will next explain why and how this is the case. It is worth noting that I largely paint a picture of three distinct sets of virtual coworker friendship facilitators; however, as I will discuss later in this section, these facilitators are interrelated, even recursive.

Virtual coworker friendship facilitators. In this section, I will delve deeper into each of the virtual coworker friendship facilitators. I will introduce the defining attributes of each, as well as illustrate how they impact virtual coworker relationship development.

Presence bridgers. One of the most prevalent themes to emerge from my analysis was that individuals who worked primarily virtually found the lack of opportunities to interact in face-to-face settings very challenging, particularly when it came to forging friendships:

> *It's much more difficult, I think virtually, because you don't have that face-to-face interaction. You don't have that regular bonding experience. A lot of friendships are formed over casual discussions…"hey, how was your weekend? Or hey, you want a drink? Or do you want to grab lunch?" All those things are nearly impossible to do virtually.* (EH21)

Consider this individual who had just joined Cloudly and was adjusting to relating to his coworkers remotely. He described what was frequently echoed; the stark difference in social cues when building friendships in a virtual environment versus a co-located one (many of my informants had previously worked in "traditional" work settings):

> *I'm used to being able to gauge people face to face and get a better feel for what they're thinking about what I'm saying; and all the non-verbal cues. So it's a little bit more challenging to pick that up over the phone or email or instant message. It will take some getting used to*. (NH12_1)

The result of not having access to such cues was aptly summarized by this individual, who voiced that the lack of in-person interaction has been and will continue to be a stumbling block in the quest to build deeper friendships with coworkers.

> *It's much more difficult for people to create lasting and really strong friendships across those different things [geographical distance]. It's just because the communication barrier that distance creates and technology creates, like even though you have a phone you can pick up and call them any time you want. You call and you don't get an answer or whatever. I walk over to his desk, I see he's not there, and I think nothing of it. But when you try and call someone and they don't answer, it feels much more like, well, this person must not want to talk to me type of thing.* (NH15_1)

Consequently, my data suggest that virtual employees circumvent the lack of constant in-person interaction that characterizes the "traditional" workplace through what I have termed "presence bridgers." Presence bridgers make it possible for individuals to discern many of the social context cues one would easily gather from only interacting in person consistent face-to-face interaction, such as physical appearance, body language, and demeanor. Because friendship is a personalized relationship, presence bridgers are necessary for its successful formation. Several activities unique to presence bridging

emerged through my analysis, namely imagination, revealing identity, learning through alternative information sources, and occasional face-to-face interaction.

Imagination. The first presence bridger, imagination, surfaced from the realization that informants frequently spoke of conjuring images of potential friendship partners before meeting in person. These imagined images filled in the social cues that one would attune oneself to when interacting with someone face-to-face. Take, for example, this informant who had never met someone he considered a coworker friend but noted, "*I picture a guy probably around six-foot-tall, slender, brown hair probably wearing a long-sleeved jean shirt and jeans*" (NH18_1). When probed on where this image came from, the participant responded, "*I would say voice, just voice demeanor based on where he was out of North Carolina*."

As depicted in the description of the North Carolinian wearing a jean shirt and jeans, these visualizations often derived from the prototypical social identity that a non-visual cue made salient. Because phone calls were a primary source of communication for the individuals in my sample (and, as noted, video conferencing was not a regularly used communication medium), many informants described how the sound of one's voice served as a stimulus of mental images:

> *I thought he was a lot older than he actually was because he had this voice if you talk to him on the phone he had a really deep raspy voice. It was kind of like I call it the "seasoned voice."* (EH22)

Others expressed a variety of cues, such as name origin or gender, which formed the contours of these images:

> *I think, like most people, you obviously can distinguish from a name or voice, whether it's male or female. Then after that there may or may not be characteristics that you can derive from their name. If it's a Middle Eastern*

> *name, you probably have a pretty good idea and you hear you know what they're going to look like. If it's Joe Smith, you don't know what you're getting yourself into… you know if they're O'Sullivan or either Hernandez or if they're Ishmael, you can kind of have some mental image of what they may look like based on other Irish or Hispanic or Middle Eastern people that you've met before.* (NH17_1)

While informants spoke of who they visualized when speaking with a virtual coworker, they just as often described how these same images did not always capture reality:

> *Well, you have a mental image and you think you know what they are and you finally meet them and you're like, oh, this person wasn't even what I thought…it's difficult, for at least me. I'm a visual person. I like to know my co-workers and actually shake their hand, get to know them a little bit*. (NH10_1)

> *What is really funny, though, and it completely knocked me off was this other guy who's another good friend of mine; he's Indian…we brought him to the States. He shows up and he says "hi, I'm Ben." And I said, "no, you can't be Ben." He said, "what do you mean?" And I said, "well I'm looking for an Indian." And he goes, "I am. What are you talking about?" He looked like he was Chinese. And he's like, "well you do realize India is this big, right?" "Yeah." He said, "well I'm from over here," and it bordered China*. (NH1_1)

And while some people, such as the individual above who had pictured a much older friend based on his voice, asserted that the difference in perception versus reality didn't change how they saw the person – "*So when I met him in person, I was a little shocked that he was as young as he was. But again it didn't change anything for me. It just was like, 'oh, that wasn't what I was expecting'*" (EH22) – as I will further discuss in the Discussion section, others admitted that the difference shifted how they thought of these virtual coworker friendship partners:

> *You have a picture of someone in your head. I guess it affects your, I don't know, your view or whatever on who that person is…sometimes it changes your perception of that person… You hear someone's voice, and you get an idea of what you think they may be like, and it's just completely different.* (EH15)

One informant, realizing the potentially biased psychological processes at play even noted: "*It really opened my eyes. I didn't think that I had any kind of biases or any kind of whatever before; but it really said, 'hey, you need to just keep a complete open mind and not expect anything*"' (NH12_1).

These products of imagination provided members of Cloudly with "*a sense in your mind to what they may look like or how they may act*" (EH19), engendering much more human-like interaction than if one were to picture only the communication medium through which they interacted. Without this perception of humanness, the development of a personalized relationship appeared to be nearly impossible to form. However, while these images clearly served a purpose, imagination, not surprisingly, also paved the path for implicit biases that may guide cognition and behavior in possibly erroneous ways. I will return to this point in the Discussion section.

Revealing identity. The second presence bridger that emerged from my analysis was revealing identity. It appears that, in revealing identity, unlike in imagination, individuals could better regulate potential friendship partners' perceptions of them. Revealing identity materialized as informants spoke of receiving or infusing virtual communications with social cues, such as pictures and emojis that could help the potential friendship partner better understand who they are:

> *She was on the Midwest team for this region and then we became really good friends. Probably her personality. She puts it in her emails and her chats and stuff. And she'll even send Emojis*. (EH10)

> *One guy in St. Louis, his son plays lacrosse. My sons play lacrosse. So funny, like you know last weekend, I sent out a picture. I'm showing my sunburn, I'm like, "I've been on the lacrosse field all weekend." He sends a picture of his lacrosse field. He's like, "me too." You know, that's like how you build friendships.* (NH13_1)

Individuals also personalized the communication tools used most often within the organization – "*some people have actually loaded their picture so that when they come up on Skype [messenger] a picture comes across*" (RT2_1) – to provide a more concrete sense of who they are when communicating with coworkers.

Learning through alternative information sources. The third presence bridger, learning through alternative information sources, became apparent as informants described going outside of interactions with their potential friendship partners to garner more information about them. Learning through alternative information sources appeared particularly important in virtual relationships because, without physical proximity, informants described it as harder to gain a holistic sense of who someone is: "*So there are things that you get and there's a certain rapport that is created by meeting face to face, by having that personal touch, that technology I don't think can replace yet*" (NH6_1). Individuals repeatedly defined three chief sources of information: social media, others within the organization, and organizational portals.

It was not uncommon for informants to recount instances in which they perused social media sites to get a better sense of who prospective friendship partners were, both to see what they looked like physically, "*based on who I'm speaking with I may do a Google search or a LinkedIn search to see if there is a picture of the person that I'm talking to*" (NH17_1), and also to unearth other relevant information:

> *I'll go to the org chart or look somebody up on LinkedIn. I'll see what their background or history is to see what our common points are. See if we have networked friends, or maybe a previous job or company we have in common. Those are the things I do to try and get a sense of who that individual is*. (RT6_1).

Often, this information would serve as the basis for understanding the broader context of coworker friends' work lives:

Members also spoke of drawing on others within the organization, "*Or I go to my manager and say this person such and such reports to such and such. Do you have a relationship with that person? What do you know about [him/her]?*" (RT7_3), as well as utilizing portals of information that were provided by the organization, such as organizational charts with employee photos or internal social media sites:

> *Well with technology these days it tends to be a lot easier because you've got LinkedIn; you've got our own internal org chart so you can go look at pictures of. You know it's like doing some research, maybe talking to other people that they've worked with [to get] a feeling for how they interact or things that they like so that I have a little bit of a background before you meet somebody.* (RT12_3)

Although alternative sources of information were often consulted, individuals did have to make a concerted effort to use them, which proved challenging for many, especially those transitioning to a new role who were trying to gain their bearings on their work at the same time as forging relationships:

> *There's so much information they provide you with, [things] like Inside Cloudly and all these portals, and I haven't had time to go on any of that. I mean it's not my priority to be perfectly honest…. If it's useful in my day to day job, I would go look something up.* (NH13_1)

Further, while these sources of information helped to refine the imagined visuals – "*Yeah, the few times where somebody actually has had their picture in their profile, and I end up whatever on Salesforce or something — you're like, 'oh wow, that's what they look like? Okay. It doesn't match their name or their demeanor at all.' It is funny*" (NH12_3) – ultimately, they still could not transmit social context cues as effectively as face-to-face interaction:

> *You can go on the org chart and see the pictures or LinkedIn or things like that. But it's funny… you can see a picture or maybe you may work with someone for six months and then meet them in person for the first time. You're like, "seriously, like, wow I thought you'd be a lot taller or something like that," you know what I mean*? (EH17)

Occasional face-to-face interaction. The final presence bridger that emerged from my analysis, face-to-face interaction, was, perhaps not surprisingly, the most efficient and effective way to understand social cues. In fact, there was near consensus among my informants that no true proxy for interacting in-person exists. For example, the same informant who spoke of the adjustment to no longer having access to "non-verbal cues," found at time 3 that, when it comes to forming virtual coworker friends, meeting in person was "*the only thing that's made the difference*" (NH12_3). This sentiment was echoed by many others:

> *I've had people that I've almost solely worked with online working from home, but I've met them one time, we all had a company gathering and we did something. Those, you have that opportunity…I have other ones that all we do is interact about work. Yeah, we're friendly and we know about each other's families, but I would never consider them a friend because I've never met them, other than on the phone*. (NH10_1)

As noted, although individuals worked primarily virtually, most did have the opportunity to meet in-person, either at organizationally sponsored events and meetings (e.g., summer outings, quarterly meetings), through their work (e.g., travelling together to customers, conferences), or by making the effort to meet in person (e.g., driving to the office when not required, grabbing a drink when in town for something else). For example, this informant from Missouri described a close virtual coworker friend from Minnesota:

> *He was up in Minneapolis, and at the time, I traveled a good percentage of the week with him. Whenever I would travel, we would meet at whatever city it was*

> *and would go to dinner. And we would go to conferences. The whole big team would go to conferences, then you get to spend time with him there.* (EH7)

Moreover, the timing of when individuals had the opportunity to meet in person played a large role in how quickly they might become friends. For example, one individual described how, "*I've had one QBR [Quarterly Business Review] since I've been here, and that was my first week. One conference and other than that I've not had any opportunity to see the rest of my team since then*" (NH17_3), yet he/she had successfully forged friendships at those events that continued to thrive when I interviewed her at time 3. In particular, this informant described one particularly close coworker friend on her team she met in person for the first time at the conference: *"we hung out together…she was only there for one of the days but yeah, we had a good time… She's a really fun person.*" After meeting in person, the two have maintained the friendship through a standing weekly check-in with each other over the phone.

When possible, meeting in person appeared to accelerate the friendship formation process more so than any other presence bridger. Informants repeatedly described how face-to-face interaction didn't necessarily have to be every day, or even every week or month, to set the stage for a more personalized and informal relationship that could then be maintained virtually:

> *You can get to know somebody as well as possible, and then it really starts over when you meet in person… The degree of friendship is based on I think getting to know somebody… sometimes all it takes is one meeting. So I've been on the phone five times, you see them at kickoff, you spend some time with them at a kickoff or something like that and then the time you talk on the phone now you're like, "this is my buddy."* (RT10_3)

> *What's really helped is we've got a couple of district management training sessions out in [Miami] so we've been able to interact face-to-face out there, and*

> *then obviously that lends itself to more open dialog when we do have our bi-monthly calls.* (RT6_2)

Opportunities to gather in-person also enabled individuals to share experiences, providing the basis for future conversations:

> *And, you know, I think, again, for me it's like a lot of it comes down to shared experiences with people…You know, you build memories together and those memories are roots and they bring people together*. (EH5)

> *People that have mutual interests that bond with, they can start out remotely or virtually, but it always seems to take some face-to-face interaction, or some sort of shared experience, to really solidify that*. (EH21)

Face-to-face was such a powerful – and often described as necessary – generator of friendship that informants spoke of going above and beyond to create opportunities for in-person interaction, whether that be calling someone up when they happened to be in town – "*I think when you travel someplace, you should go out of your way to see people*" (NH5_3) – or organizing co-workers to have lunch on the same day, despite the extra effort:

> *I'm usually the one who instigates it. Because I start saying around, "hey if I come down, do you guys want to go to lunch on Thursday afternoon?" And then you've got to work through everybody's schedule, and it's actually more painful than it should be*. (NH10_3)

On the whole, presence bridgers enabled individuals to discern the person behind the computer screen or phone. In doing so, informants described how they felt more willing and able to forge friendships with their coworkers. However, coworker friendship also necessitates the establishment of a bond that transcends the work-related relationship itself. Consequently, presence bridging alone is not enough to take a coworker acquaintance relationship to a full-fledged friendship.

Virtual relational informalizers. As noted, one of the strongest predictors of coworker friendship in a virtual context is work interdependence (Sias et al., 2012). Indeed, if not for work-related reasons, it is far less likely that virtual coworkers will ever interact. It is not surprising, then, that one of the most prevalent themes that emerged from my analysis was that, without the "*water cooler talk*" (EH5), virtual relationships tend to be much more formal than those with regular in-person interaction: "*Everything is virtual. Which is good and bad, right? You get a chance to talk to them, but it's very formalized. It's very rushed, and jam-packed full of information because everybody's got so much stuff going on. And it's just a little impersonal*" (NH21_2). This sentiment was echoed by a manager describing how he/she sees friendships form on a dispersed team:

> *Well, see, what will happen is everyone has their responsibilities and what they're off doing, so they're all field based. So it might be that a simple thing like somebody has a really big job coming up…like they'll have to install a lot of equipment or something…and two hands are better than one. Or four hands are better than two.* (EH3)

Informants implicitly recognized that informalizing the relationship was important for both work-related and socioemotional reasons. They often spoke of purposefully taking action to transform a work relationship into a more informal relationship based on topics that go beyond the workplace. This second set of virtual coworker friendship facilitators, virtual relational informalizers, emerged as it became evident that informants took deliberate measures to break through the formality created by the barrier of virtuality: "*It takes someone to break the ice really; it seems to be when you join a virtual meeting, their attention is on the subject that needs to be discussed and it's discussed and*

the call terminates" (NH22_2). From my analysis, two main ways emerged in which my informants described informalizing their relationships: personalization and sharing emotion.

Personalization. The data suggest that individuals often expanded the content of their coworker relationships to include non-work related content in the process of forging virtual coworker friendships through personalization – defined as developing perceptions of individuals that reflect their unique characteristics (Brewer & Miller, 1984). In virtual settings, informants described this as necessary:

> *I mean in like a virtual meeting, you're missing the visual cues, you're missing you know that personal interaction that lets you know when things can get a little bit more personal.* (NH22_2)

Like in-person friendships, individuals frequently spoke of conversations that organically veered away from work topics onto more personal subjects. These spontaneous moments of self-disclosure often unlocked the door to the beginning of a virtual friendship: "*Yeah, there's a few [people I have gotten to know better] and it's because you may have had a phone conversation with them which has gotten off of strictly work and gone into something maybe a little bit more personal*" (RT2_1). The naturalness of personalization was echoed by others:

> *He constantly will chat me and ask me what's going on with this, do I need help with this, and we would talk on the phone, and then he – I don't know, he just started telling me how his wife just had a kid, and it's random how things like that happen*. (EH13)

However, because virtuality tends to make work relationships more formal by default, informants described how relying on friendships to naturally emerge from coworker relationships was often not enough. Instead, they spoke of the need to

proactively change the nature of the relationship. If not, "*it can be difficult to establish that sense of personal relationship because everything is, to be honest, it's very impersonal*" (NH21_1). Often this took the form of going out on a limb to infuse something personal into a work-related communication:

> *I reach out because I have a question and an individual is a specialist in the area. So, I will reach out and say, "hey, how are you, I've got this question from a customer, and by the way, how are things?" I am asking a business question but also at the personal level.* (RT5_2)

> *I emailed them all last week, it was our quarter end. I said we're all new [to] sales, we all have the same job. I said, "how you guys doing, how are you guys feeling about things?" Just so like I feel like we're our own little group of like "hey, we can bounce stuff off of each other because we all started at the same time and let's kind of have that camaraderie."* (NH13_1)

Asking others personal questions emerged as a frequently invoked way of personalizing a relationship:

> Y*ou just start, you know, asking more questions. "Where are you from? Where did you go to school? You know, you're married, what's your husband do?" Eventually, you know, it's like something that is very comfortable. Like, you feel like you know the person, just through a completely virtual working relationship*. (EH16)

Questions were useful in breaking through the "barrier" of virtuality that increased the formality of coworker relationships because, as described by this new hire at time 3, "*I think anybody that feels like you have interest in their life, they tend to open up a little bit so that's kind of what I do*" (NH13_3).

Personalization also took the form of connecting with coworkers on certain social media sites. It was common knowledge that LinkedIn is primarily a professional way of connecting via social media. Other sites, however, like Facebook and Instagram, were

reserved for only those individuals with whom the relationship is on the path to or already has transcended a purely work relationship:

> *Everyone's on LinkedIn, everyone's my friend on LinkedIn. That is my professional network in my opinion, and Facebook is my personal life. But I am friends with some of the people from here that I've gotten closer to…if they friend me, I don't always accept it, just based off of the relationship I have with them. I guess because I'm sharing everything about my most private life; my kids, my family, my house, my dog, all that good stuff.* (EH7)

> *I have a line in the sand…there's a line we have to cross to get to that point [Facebook friends]…and what that means usually is that we kind of moved past the, "you're the guy I see in the office once a week," and we chat about things.* (RT9_1)

Since they typically lived outside of easy driving distance from each other, these more personal social media sites allowed Cloudly members to learn, often through pictures and other posters' comments about their coworker friends' lives, without ever visiting each other: "*Facebook friends it's kinda like, 'oh, I saw you went out with your team and did this. Oh, now I know what so and so looks like'*" (EH8).

Sharing emotion. The second activity of informalization, sharing emotion, developed as informants spoke of how those individuals with whom they shared emotions, both positive and negative, stood out in their minds as potential friendship partners: "*I interject a lot of humor in any interaction I have whether it's virtual or in person just because the nature of life is sometimes just crappy… You can tell [if they're friendly] by how they respond to your humor*" (NH14_3). For example, this informant describes how he/wrestled with the possibility of leaving the company and reached out to the two people considered friends:

> *I chat with them constantly. Like this morning, I told them that I potentially may be leaving the company, and so [John] and [James] called me and left me a voicemail telling me how sad [they are].* (EH13)

And many informants described "venting sessions" as a very important part of how they bonded with virtual coworker friends: "*he calls me every other day because he needs to vent about his new job*" (NH10_3).

Ultimately, sharing emotion that goes above and beyond the prescribed work relationship facilitated deeper bonds and enabled individuals to intimately and more freely connect with each other: "*So I think it's just—we have enough shared emotion for lack of a better term…we've developed that bond that says, 'if I need something…I call [my friend]"*" (RT9_2). That said, when emotions were inappropriate or not viewed positively, it could actually be a red flag in terms of developing a friendship with that person:

> *That's really for me, that's a big part. How do people react under pressure and if it makes it a little bit negative, I cut off…I've seen people get angry. Do they get agitated? Do they get insulted and run to the boss?…Those people, I keep at arm's length*. (NH22_3)

Relational digital fluency. Although presence bridging and virtual relational informalizers enabled a personalized and informal relationship, the data also suggest that individuals required a unique set of skills or abilities to form and maintain virtual coworker friendships. While many individuals spoke of how hard it was to develop and sustain virtual relationships because of the communication barriers virtuality presented, others exhibited relational digital fluency, defined earlier as an individual's ability and comfort in forming and maintaining coworker friendships through virtual communication media. This theme surfaced during my analysis when it became evident that certain individuals were more or less adept at forming and maintaining virtual coworker friendships. As this informant succinctly explained, relational digital fluency often

developed from previous experience working virtually or from maintaining virtual friends outside of the workplace:

> *The reason it's not [hard to form friendships virtually] to some extent is because I spent a year working on—out of my house. The last year so that—during that time my interaction was with coworkers who are strictly remote, without going into the office for any more than maybe once every couple of months and that was just for a day or two.* (NH7_1)

Informants who exhibited relational digital fluency demonstrated both virtual social intelligence and media proficiency. These skills are highly related as it likely takes a certain level of comfort with CMC to convey and attune oneself to social cues, and a certain level of social intuition in the context of CMC to communicate and pick up on these social cues in a manner conducive to forming and maintaining online coworker friendships.

Virtual social intelligence. As informants spoke, it became evident that those forming virtual coworker friendships had a capacity to discern and communicate social cues through CMC about potential coworker friendship partners more so than those who were unsuccessful in making virtual coworker friends:

> *You pick up on certain things from people. How they reach out to you. People that text they'll send you – you go back and forth with them a lot. There's a lot of machine gun back and forth. Where other people you get on the phone. It's a half hour conversation. It just depends.* (RT9_3)

> *I think that there's some basic qualities that people have offline that can transition over. For me, personally, I am much more effective face to face. I think I do a better job with nonverbal communication in helping me with my messaging versus just talk on the phone.* (RT10_3)

Virtual social intelligence often mattered when it came to decoding virtual relational informalizers such that when one relational partner signaled a willingness to

share certain emotions or broaden the boundaries of the coworker relationship, the other had the ability to pick up on that signal and respond in kind:

> *And when there's issues, within work, I think you kind of get a good judge of the type of person, how they react to it. So some of the CEs [Customer Engineers] make jokes about the issues, and some are very stiff. I'm more of kind of a loose person, so if there's an issue, I try to make light of it. So I think just time, and seeing how these people react to certain situations.* (EH14)

> *I mean you can usually tell…People are talkative and they tell you about their family, and they tell you about what they're doing outside of work, they're the ones that are looking you know to share things*. (NH10_2)

Those with virtual social intelligence also displayed an ability to pick up on the idiosyncrasies of a particular individual in a relationship and appropriately respond: "*The way that she answered me [via email], I was like, 'this is weird.' It was a real different, out of her character response. Kind of negative. So I just decided to call her up instead and said, 'okay, what's going on? You okay?' You know, and talk things through and realized she was having a bad day*" (EH9). In the end, being attuned to others' communication preferences, as well as the content of those messages, facilitated smoother and richer communication:

> *You pick up on certain things from people. How they reach out to you. People that text they'll send you – you go back and forth with them a lot…Where other people you get on the phone. It's a half hour – hour conversation. It just depends. As somebody's whose job is to communicate, that's part of what you have to learn. It's one of the things we don't teach people. But it's something that you have to develop.* (RT9_3)

Virtual media proficiency. While virtual social intelligence captures an individual's ability to distinguish specific cues and habits in coworkers' communications preferences and to appropriately respond, virtual media proficiency captures comfort with forging coworker friendships online, including knowing when and how to use the right

medium of communication. While the individual quoted above (EH14) explained that she was comfortable with forming and maintaining virtual friendships because of prior experience using virtual media to do so, this did not hold true for all informants in my sample. Just as a lack of virtual social intelligence can stunt the formation of virtual coworker friendships, so too can the lack of media proficiency:

> *The friendship that I would have in my generation would be somebody you actually do stuff with: you play golf, or you have lunch, or you have interaction, have face to face interaction with them. I would say you could only do that if you actually are in the presence of, or in the area of, where those people are.* (EH19)

For informants who were comfortable enough to form friendships with virtual coworkers, the data suggests a necessary level of proficiency communicating across various virtual communication media to enable individuals to interact according to others' preferences:

> *I consider myself pretty flexible. I don't really have a preference other than not voice mail. So if people prefer to communicate via email or text or just phone calls, I'm pretty quick to adapt to that because I want it to be easy for them to communicate with me. But yeah, it's just figuring out what those people are comfortable with.* (RT7_3)

At a deeper level, though, informants discussed how their preferences for communicating were grounded in the closeness of a particular relationship one had developed: "*So there's the business line and the personal line and for those people that are friends of mine that we do things with, yeah, I text all the time and shoot messages to people all the time and call and talk to them and send pictures and that*" (RT4_3). Others described how their mode of communicating with a particular person was based on that person's preferences:

> *So for [Kristie], IM is awesome. Typically, she's doing 400 different things and on calls all the time…Because if I waited for a callback, it could be 5:30 or 6 or 8 that night, and I don't have time to wait for that...Yeah and then I have an engineer, my customer service manager, that I interact with. He is almost always*

> *a phone call and very little communication via email because I can understand more about what he's saying by listening to the tone of his voice.* (NH14_3)

However, the unfolding dynamics of the relationship also mattered. For example, the informant quoted above (EH9) as having decoded a departure from her friend's "normal" over email, explained how she then switched communication vehicles to understand what was going on better. And knowing which medium to use and when was also a matter of the organization itself. Illustratively, this new hire explicates how, upon entering the organization, he/she had to conform to the communication media norms of the setting to forge any relationships at all:

> *My preferred communication style is face-to face. But for remote, it's probably split almost 50/50 between phone and email, maybe favoring email a little bit. And then, I just started using internet chat more. That seems to be the more common, preferred way to communicate here*. (NH4_1)

As noted, virtual social intelligence and media proficiency are deeply intertwined as greater proficiency likely leads to an increased understanding of how others communicate and how one should communicate through CMC. That said, it is plausible to exhibit one aspect of digital relational fluency, like when an individual is proficient in virtual media but lacks virtual social intelligence or vice versa. In such cases, an individual would not have attained relational digital fluency, as forming and maintaining virtual coworker friendships requires both virtual social intelligence and media proficiency. To be sure, relational digital fluency played a huge role in virtual coworker friendship formation and maintenance. Without it, informants described how relationships could never progress from acquaintance to something deeper and more intimate:

> *I want to talk to somebody. I am old school…I want that tangible relationship. But he wasn't that way. So it was like, "okay, if I want to talk to [John], I have to text [John]" …it took me getting frustrated because [John] never calls back or when he does it's always rushed…That's one of the first things you have to figure out…You have to build – for lack of a better term – almost a common language...Whether that's email, IM, text, Twitter…Every relationship is different*. (RT9_2)

> *That's one thing corporations they don't really spend any time telling you how to manage that whole piece. And I'd say some people need that. Some people aren't good. Especially in our IT world. A lot of people aren't good at relationships period. And then if you throw them outside an office and say I need you to work with all these people, you have some difficult relationships.* (EH19)

How the facilitators interact over time. As shown in Figure 1, although I painted a picture of three distinct virtual coworker friendship formation facilitators, they are highly related, reinforcing one another. That is, as individuals engage in activities representative of one set of facilitators, they more easily open the door to other facilitators. For example, as individuals learn about each other through alternative information sources, such as Facebook, these presence bridging activities often facilitate the use of relational informalizers as individuals can use the information gleaned as the basis for a subsequent conversation:

> *I probably wouldn't know what they are doing otherwise. So it would be like, "oh, they were out of town this weekend. Cool. Maybe I can ask them about it*." (NH9_3)

Further illustrating this recursive relationship, this experienced hire described how past experience with virtual friendships built relational digital fluency, making it easier to form and maintain current virtual coworker friendships (i.e., engage in presence bridgers and virtual relational informalizers):

> *I grew up at the early stages of the internet, so I was always making some sort of friendship virtually…I don't know that working virtually hasn't changed it at all, other than it's work friendships instead of just strictly personal friendships…A lot*

> *of the people that are in that older generation, they've been in this industry long enough that they've adapted with the industry and working remotely with their co-workers. So, what I lack in experience with actual co-workers, and have in outside of co-worker friendships, they've had with co-worker friendships in the past*. (EH19)

In total, the emergent virtual coworker friendship facililators are interrelated and recursive. This engenders a cycle through which individuals can convey and discern social cues as they informalize their working relationships and vice versa. They also become more proficient at forming and maintaining virtual coworker friendships with each successful presence bridger or relational informalizer. However, as I will explore further in the Discussion section, not all attempts at presence bridging, relational informalizing, or building relational digital fluency are successful.

Managerial stage setting. Up to this point, my model has been solely focused on the actions and skills of the individual attempting to form virtual coworker friendships. But as I highlighted earlier, the organizational context can exert a strong influence on how virtual coworker friendships unfold. One of the most important effects on relationship development in a virtual context is management. Without co-located space, managers are often the ones responsible for bringing their team members together on a regular basis via virtual meetings:

> *I'm trying to facilitate friendships…not stifle them. …It helps to have my team be friends with each other because they feel more connected – you know…greater employee retention, they'll be happier here.* (EH4)

Throughout my analysis, the extent to which managers set the stage for virtual coworker friendship facilitators emerged as an important determinant of the extent to which informants employed the facilitators. For example, social presence activities were often initiated by managers, as expressed by this experienced hire who described how her

manager facilitates relationships between team members in the United States and those in India:

> *I think the coolest thing, the simplest thing anyone can do, is he asked us all for a picture of ourselves, because we talk to these people all the time, but we're like, what do they look like, I don't even know, I'm just guessing*. (EH14)

Managers also created virtual contexts in which employees could get to know one another beyond their work. Take, for instance, this new manager who described how the person he had replaced worked to informalize relationships on the team he now manages:

> *One of the things that my predecessor did is on every team call he was having us do an "all about me" slide where it was telling everyone all about them personally. Like about their family and their history and what interests them, and you know what makes them tick and whatnot…I am probably going to have my new hire build one here in another week or two for our team meeting towards the end of the month.* (RT11_1)

Other managers spoke of trying to bridge personal interests between team members:

> *I try to do little things, little fun things, that are totally not work-related. We do a Friday song of the day so in the morning or at some point on Friday we – somebody sends out a song like, "hey, this is what I'm feeling today or like I have to share this today." I think it kind of just gets people talking a little bit more on a personal level, like finding out other things rather than just the business side.* (EH9)

More generally, this manager spoke of his role in creating opportunities for interaction:

> *But as a manager or as a director, as someone responsible for resources, you can certainly do things to establish activities or communications…whether it's formal or something informal to facilitate the interaction.* (NH7_3)

Some informants also noted that management required them to take courses on how to handle their relationships, seemingly aimed at building digital relational fluency: "*The interpersonal [training is on] how to manage your time, manage your manager…you know, conflict management, and stuff. In two months, I have to do 60 hours of training…it's all online*" (NH10_2).

That said, when managers did not set the stage for the virtual coworker friendship facilitators, informants noted the impediment it created to forming friendships – "*I think that my part of the challenge here [in making friends] is my boss is so new…He is still kind of trying to find his way. He doesn't know sometimes how to help me"* (NH13_1). The impact of a manager's lack of stage setting was echoed by another individual who discussed the lack of camaraderie on his team, and how he had become close with the person who was formally assigned as his mentor but with no one else:

> *We have a manager who's not a very good manager. He's not – and I'm not saying managers should all be like this – he's not a, "rah rah, let's all get together!" This thing we did [an informal information sharing session], he was not around. And then he didn't show up for hours at the golf thing [a team outing]. He's just not a sociable guy.* (NH10_3)

Maintaining the friendship. Through presence bridging, virtual relational informalizers, and relational digital fluency, individuals described building virtual coworker friendships. The challenge, however, was to maintain these virtual coworker friendships by continuing to engage in presence bridgers and virtual relational informalizers. Because they are largely based on a working relationship, when that relationship dissolves (e.g., a role transition, the end of training, completion of a project), keeping in touch takes a significant amount of effort, especially when compared with the ability to saunter over to someone's desk and chit-chat informally – "*if someone's like out of sight, out of mind, your relationship isn't as strong*" (EH5). As this third round role transitioner noted when reflecting on her coworker friends that she made in her previous role: "*There's no reason [to keep in touch] and I literally don't have the capacity to maintain those relationships any more*" (RT3_3). This new hire (NH9) echoed a similar sentiment when describing coworker friends from a specialized orientation program he

attended. At time 1, he mentioned that he formed special bonds with a few of them: "*Most of [our communication] is one-on-one. Every now and then we still have our group chat that is on my phone, which gets pretty outrageous sometimes, but most of the time it is work related.*" By time 3, however, he was much less enthusiastic about these relationships: "*But it starts to dwindle as you know, naturally you're not going to see them, and the chitter chatter on the group textings goes away. It comes less and less.*"

On the other hand, some informants described making a concerted effort to maintain those ties, at least in the beginning: "*We just made sure that once we left [new hire training] we didn't go back into our little spider holes and just focus on our little job*" (RT9_1). Consider also this individual who became more virtual with each interview conducted, such that by time 3 he was 100% virtual. At time 2, he noted: "*I make a point of stopping past most of the offices of people that I've known over the years, just trying to keep that connection alive*" (RT2_2). Four and a half months later, though, he spoke of how much harder it was getting to maintain these friendships: "*When you go into an office a few days a week or five days a week, you end up seeing a lot more people on a regular basis. But when you're virtual, the day that you do finally go into the office, you may not see anyone.*" This suggests that, even after a friendship is formed, presence bridgers, virtual relational informalizers, and relational digital fluency are just as important to continue enacting, even if the content of these interactions morphs as the relationship does over time. Moreover, although I have painted a largely forward-moving process of friendship formation, these data on friendship maintenance suggest that these relationships do not always progress linearly. I return to this topic in the Discussion section.

At the end of the day, though, regardless of whether these virtual friendships were replaced or joined by new virtual friendships, the outcomes of having virtual coworker friends (as is consistent with much of the literature) were viewed as largely positive. Coworker friends are the people, "*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*" (EH4). To be sure, getting to personally know virtual coworkers had work-related benefits:

> *Honestly, I think it [friendship] breaks down barriers and people are more apt to be more conversational and be more blunt and open and ask the hard questions. Or ask the stupid questions as well. So I think having more of a friendship than just a co-worker or acquaintance fosters probably more growth, and I guess knowledge between all of the team members that are participating.* (NH8_2)

One of the most commonly expressed benefits of virtual coworker friendships related to timeliness or responsiveness. For example, this individual told a story of how she worked virtually with a coworker for more than a year, thinking he lived halfway across the country. One day, they found out that they lived merely blocks from one another and made plans to have breakfast together. She said, "*Now that I have his personal cell phone number and now that he sees that I'm calling, he answers…Whereas before, he'd get back to me but it might be 36 hours. Now he's getting back to me in 12 minutes*" (EH27). This responsive likely stems in part from the motivational aspects of virtual coworker friendship:

> *There's a personal motivation because I want to see my friend succeed and do well, and especially if they're working for me and their success is sort of my success too… And then, in conjunction, I think that everyone has different experiences and insights into different things we're working on. So if I don't know how to do one thing or another, I could reach out to [them].* (EH5)

But while some saw coworker friendships as increasing effectiveness, others believed there were potential tradeoffs:

> *Okay, if you're fostering friendship, does that mean you're building friendship within work, does that mean you're working more hours? Or does that mean you think it's gonna help with the work-life balance? Meaning that when you're going to work and you're working with friends, does it make your job less stressful? In customer service, no.* (EH2)

> *And, you know, sometimes if you become good friends with someone at work and then you start being friends outside of work and then something happens. That's why employers discourage relationships, right? Because they can go really bad and then you bring that [coworker] relationship into a bad relationship.* (NH3_1)

However, as Methot and colleagues (2016) noted, on balance, the benefits of friendship appear to outweigh the potential negative consequences. In my second research question, I will explore the nature and implications of the previously mentioned potential challenges to these relationships: tensions that result from the incompatibilities of simultaneously being friends and being coworkers. It is this topic to which I turn next.

RQ2: The Dynamics of Virtual Coworker Friendship Tensions

As previously expressed, we know from extant research that individuals who work in "traditional" workplaces experience tension between simultaneously being friends and being coworkers (Bridge & Baxter, 1992; Sias et al., 2011, 2004). Throughout interviews, informants, both unprompted and prompted, spoke of virtual coworker friendships getting "*messy*" or "*complicated*" (EH3). They described becoming "friendly" with coworkers but not "friends" per se because of the potential for these tensions to present themselves – "*I have so much riding on my career and my reputation in the workplace*" (NH3_4). The dynamic nature of these tensions – and the reason they exist in organizational life – was best summarized by this manager:

> *Along the way, every friendship has ups and downs. At times we just don't see eye to eye. There are times to give each other a pat on the shoulder. It's part of the culture right now. But I go back to the fine line. There are times we have to sit down and have tough conversations. As a leader, you have to be – I wouldn't say guarded but cognizant of that. I do want to have a friendship to the engineers that report to me. But by the same token, there has to be a time when I have to act in an authoritative way. You have to move on because I said so.* (EH18)

What we don't know, though, is how the virtual context may affect the extent and nature of these tensions. Further, if it does, how do individuals experience and manage these tensions over time? The second research question in my dissertation sought to answer these questions.

As noted, scholars have applied a variety of theoretical lenses to the study of tensions in the workplace (e.g., paradox, duality, dialectics) (Ashforth & Reingen, 2014; Baxter, 1990; Lewis, 2000; Smith & Lewis, 2011). Common to all of these perspectives is that the incompatible elements that underlie tensions remain largely masked until they are provoked. Once salient, individuals experience discomfort or dissonance. The evoked discomfort requires a response in an attempt to return to a manageable status quo where the tensions may still exist, but they are not negatively experienced (Kets de Vries & Miller, 1984; Lazarus & Folkman, 1984). As illustrated in Figure 2, my data suggest that the basic process of how virtual coworker friendships unfold largely mirrors that articulated in extant literature. However, it became apparent through my data collection and analysis that the virtual context played an integral role in shaping how virtual coworker friendship tensions were prompted, experienced, and managed.

The virtual coworker tension process. In this chapter, I will briefly illustrate how the basic tension process unfolded in my sample, and will then delve more deeply into the ways in which virtuality transformed it.

Latent tension. Early in my analysis, it became obvious that the incompatibilities of being virtual coworker friends were present, but not always detectable. Informants denied feeling tension in their relationships, but would, throughout the course of an interview, contradict themselves or describe how they managed their coworker friendships in such a way as to avoid tensions; in short, they engaged in "doublethink" (El-Sawad, Arnold, & Cohen, 2004):

> *I've definitely seen instances where I probably tend to stay back a little bit based upon how I've seen people do things. Or I even think, "ah, you know, I've got to work with this person but I definitely want to keep that relationship at a professional level and not necessarily move more towards a friendship" ...No, I mean quite honestly, I don't think I can recall any instances of [tension]*. (NH18_3)

> *[In response to the question, "Has there ever been a time when being friends and being coworkers at the same time was awkward or weird?"] No, but I can see that [tension] happening with people. I try to – because I've been friends with many coworkers beyond work and everything, so you try to keep business as business and not take it personal…. I just tell yourself, "don't take it personal." That's how I do it. "Take a step back. They're not attacking you. This is your work."* (EH8)

Often, participants would consider the interview prompt about experiencing tensions in their virtual coworker friendships and would instinctually deny their presence, "*Probably not. I would probably just say no tension*" (NH3_3) and "*No, it makes it easier to talk to people because I think all – I think people stay at their job because of people…*" (EH7). Yet, after a pause or later in the interview, the very same informants would describe a situation in which tension existed:

> *I would probably just say my boss…he's a really good guy. I like him a lot, but when you're in settings where it's easy to share personal stuff, I tend to be more reserved. And he probably kind of looks at me like, "oh, why don't you talk more?" And I don't like to do that, because you're my boss and even though you're a good guy, you're still my boss.* (NH3_3)

> *…I had a person working for me that I was friends with from my old team and they came over and it wasn't necessarily a good role for him anymore. The role had changed from when he had came over and I think he tried to use our friendship a little bit to his advantage to where he wasn't working as hard.* (EH7)

Although it is hard to capture such intrapsychic dynamics, it is likely that just the trigger of my interview question was enough to surface the latent tension. For example, this new hire first considered the interview question and could not think of an experience in which tensions were present in his virtual coworker relationships. After reconsidering, he described a situation from very recently – the week prior, in fact – in which he felt compelled to confront his closest coworker friend to let him know that the way he dressed when they met at a customer site was inappropriate:

> *No. No, no, I think we get along well. So there's certainly not been any [weird moments]. Well, I will say there was this one recent situation…* (NH17_2)

Shock to the virtual coworker friendship. As my analysis continued, the data showed that discrete "shocks" jolted the norms of the virtual coworker friendship such that they evoked feelings of awkwardness and discomfort. One informant even described a situation as a "*trigger point*" (RT10_3). Although extant literature suggests that these events could be anything that highlighted the incompatibilities between the coworker and friendship relationships, my systematic analysis unearthed the three most common contexts in which informants described the coworker friendship tensions as salient in a virtual workplace: role shifts, unmet expectations, and boundary violations.

Role shifts. One of the most common shocks that informants described was when a coworker friend at peer-level was promoted to manage the other friend:

> *I still have, you know, relationships with the people that I had before. It's just a little bit different because you're the manager. There's a little bit of caution there in getting too close.* (RT4_1)

> *The only time in my entire work history that I've ever had an issue with that was when I got promoted in a position to where I became a supervisor of somebody that I was friends with. And, that made it difficult because, them seeing me as a friend, they thought that they could get extra privileges at work, and it did deteriorate the friendship.* (EH19)

Informants conveyed these role shifts as particularly problematic, both for the informant and his/her friend. This individual, for example, reflected on how one of his friends had ultimately become his subordinate:

> *So we became very good friends. I went to his wedding, he came to my son's wedding. Very good friends. And then, later on, he ended up working for me… one time, I actually had an incident where that person had made a mistake in the field that had to be dealt with, and I had to be very careful not to show any favoritism in this case.* (RT2_1)

Interestingly, realizing that his current role shift was a transition out of managing people, this informant further noted, "*It's funny, now that I'm back to being an individual contributor, I'm more free to not worry so much about that separation*," further illustrating the ebb and flow of these tensions.

Unmet expectations. Informants also spoke of their friendship partners failing to meet expectations related to being a good friend or a good coworker. Most notably, this often took the form of a coworker friend whose job performance was subpar:

> *A close work friend who is struggling…to contribute in a meaningful way because his personality is just at odds with what he needs to do. So you want to try and find the way to thread the needle to encourage him to move on, but…I mean you don't want to hurt his ego, and that ego thing was part of sort of his challenge… just over time, eventually you become poisoned because that's all that's your world. You're the dog that lives in the cage. You never see the light of day.* (EH28)

These performance issues were even more complicated when a reporting relationship was present:

> *I had a person working for me that I was friends with from my old team…I think he tried to use our friendship a little bit to his advantage to where he wasn't working as hard. He thought that he'd just automatically get a good rating when it comes to performance review so when that didn't necessarily happen he was not very happy…I haven't kept up with him like I have everybody else.* (EH7)

But unmet expectations also represented personal failures, such as this instance when an informant discovered that his coworker friend was struggling with substance abuse, "*He stabbed me in the back because he let me down as a friend because of the substance abuse that got, you know… You become so suspicious, untrusting at work, you just hunker down…you don't put yourself out there – at least, I didn't for the longest time*" (EH25). Similarly, another person expressed dismay when one of his coworker friends showed his true colors outside of work:

> *A lot of times he would do things if we'd go out in public and he would make bad decisions and it really got to the point where I was like, "hey man, I like you but you're continuing to make the same mistakes. I just don't think I want to hang out with you outside of work anymore. I'll treat you with respect around the office because you're good at what you do. But I just don't want to associate with how you approach people outside of work."* (EH17)

Failing to live up to either the friendship or coworker expectations was described by informants as straining – "*I would say that caused some serious problems*" (RT11_1) – ultimately prompting action to ameliorate the discomfort.

Boundary violations. The final emergent category of shocks to workplace friendships was boundary violations. These occurred when informants described tension emanating from an individual violating the norms of the coworker friendship. Unlike friendships that occur outside of the work context (non-work friends), coworker friends are "*tied together, so there's a negative of a workplace friendship*" (EH16). Informants described how necessarily interacting with each other made it harder to escape the

tensions, particularly when interacting in person. For example, this experienced hire described an in-person encounter with a coworker friend and the potential implications of competing over a role:

> *They asked if I was going for the role and I said, "no, I'm not going for it." And it's like you could see almost a loosening of the façade between us. Because it's like "no, I'm not competing against you, and so well now that I'm not competing I guess we can interact." That's what it felt like to me. It just did. It was kind of odd.* (EH25)

Study participants also recounted similar instances with past workers. For example, this new hire noted that, when he went through the hiring process for his new position at Cloudly, he was unemployed. When he found out that one of his friends from his previous job was also in the running for the position at Cloudly, he felt disrespected: "*This job that I've got came down between me and another, but I actually hired him for the company that he still works for, and I'm like, what are you doing? You've got another job"* (NH11_1). He continued, "*I had to set aside the friendship and then let him know that, 'hey I got the job, but if anything comes up, I'll let you know'…it was awkward to have to tell him that [I got the job]*."

Boundary violations also arose when one individual in a coworker friendship falsely assumed closeness in a relationship. Illustratively, this informant talks about a coworker friend who invited her to stand in her wedding:

> *She took me out to lunch, and she pulls out this gift and I thought she was being nice and brought something back from vacation. And I opened it up and it said, "will you be my bridesmaid?" And I'm, "what?" I had no idea. I was confused and I didn't mean to be offensive but I was literally that shocked.* (EH19)

She further explained, "*We had a ton of success last year, but I still just kind of feel our friendship is more centered around work*." Because of the assumed closeness, she

described that an invitation meant to be flattering actually created a rift between them. She recounted a conversation with another coworker in which she said, "*I just have to get this off my chest because – I don't know – I feel I have to hang out with her more now and get to know her better now.*"

A fork in the road: Tension response. Because a shock to the virtual coworker friendship yielded stress that was potentially difficult to tolerate, individuals often worked to minimize the tensions: "*And if it's [the tension] not managed, and not consciously thought about, it could lead to a downward spiral. And then you have a corporate culture where it's like a Lord of the Flies playground*" (NH4_1). Paralleling those management strategies found by Bridge and Baxter (1992), informants told stories of selecting work over friendship (e.g., "*I have a very good way I guess of separating…Yeah, job is always first obviously,*" NH6_1), friendship over work (e.g., "*I didn't want to leverage that friendship to do that. And I didn't want to put him in an awkward position where he was promoting me because I was his friend. And I think that, in a sense, that hurt me career wise,*" EH3), or separating the two entirely:

> *A lot of people, they say, "I'm not going to become friends with anyone at work" because they have personal relationships outside the work that they made through college, neighbors, etcetera. And then they do want to keep that separation between the two because of the potential conflict of interest.* (NH15_3)

Throughout the interviews, however, it became apparent that individuals tended to describe their management strategies as either emotion-focused coping, defined in Appendix B as alleviating stress by focusing on reducing the aversive emotions prompted by the stressor, or problem-focused coping, defined as alleviating stress by addressing the source of the stress (i.e., the stressor) (Lazarus & Folkman, 1984).

Emotion-focused coping. Informants frequently spoke of coping with virtual workplace friendship tensions by minimizing the negative emotions the tensions evoked. Most often, they noted addressing the felt tension directly through a conversation, such as this new hire reflecting on a coworker friendship from his past role:

> *Even after a tense time we always tried to explain. I think we over communicate, that's how I got over it…. Say, "hey, listen to this. And I apologize if you feel this way but that was not what my intent was, this is what I know"... at the end of the day, we always tried to clarify and help each other…we always went out and had a laugh. I think the friendship always took over without heated exchanges.* (NH16_1)

Participants also communicated times when emotion-focused coping took the form of creating distance after discomfort was experienced. For example, this informant described her response to awkwardness after connecting on Facebook with coworker friends:

> *I was Facebook friends with them and I'd come in Monday morning…and they'd be like, "oh hey, you were over here, I was there this weekend, blah, blah, blah," and you could just tell that they checked Facebook all the time and I was like, "okay, this is weird," and I kind of like backed away from that like, "yeah, you don't need to be knowing everything."* (EH9)

In both situations, individuals acted to reduce the discomfort of the incompatible elements of virtual coworker friendships. However, they did not address the incompatible elements themselves. Because emotion-focused coping largely masked the symptoms of virtual coworker friendship tensions (i.e., reduced the salient tension) while not necessarily addressing the underlying causes of the tensions, informants who utilized emotion-focused coping sometimes described experiencing recurring cycles of tensions. Consider this individual (RT1) who was friends with those on his team, and was then promoted to be the manager of the team. When reflecting on his time as a peer on the

team, he described experiencing tension because of too much partying on the team: "*We were doing a bit too much drinking in my opinion…too much alcohol, too many bad decisions, too many stories, so just a little bit 'over rotated' there. I just wanted to pull back from that a bit*." In response, in his/her first few months of managing the team, the informant described the "*personal relationships but in a professional manner*" he hoped to foster instead through "*more family based*" events. However, at time 3, this informant noted, "*Now I think you got to make time for things like that, and so I try to do that but if I'm over rotating it's probably over rotating on a professional side of it at the moment… I'm going to have to bring a balance back to that.*"

Problem-focused coping. On the other hand, informants often described tackling tension-provoking situations head-on, such that the source of the tensions themselves – the very fact that coworker friendships contain incompatible elements – was less problematic. Problem-focused coping thus facilitated a reduction in the latent tension that sparked the feelings of discomfort in the first place. One way in which informants narrated instances of problem-focused coping was when they spoke of evading conditions under which they had experienced coworker friendship tensions in the past or could foresee tensions arising:

> *I had to lay a lot of people off. I had to lay friends off. So I think, emotionally what that made me do is develop kind of a divider.* (NH5_1)

> *I mean people do gossip and stuff, but I'm not a gossiper. I don't really [like] the people that gossip or cause drama. I kinda avoid them a little bit…Then there's certain people that, you know, like to stir up trouble and stuff. I call them for work-related questions, but as far as hanging out outside of work, I don't.* (EH10)

Another individual described entirely avoiding coworker friendships with current virtual coworkers: *"You just have to be careful…Typically I find that the ones I enjoy talking to*

while I work with them, I reach out to them and connect with them after I've moved on to another job" (NH3_4). Such measures were often taken in particular when it came to social media – *"I'm not Facebook friends with anybody in the office. It's not that I don't like them or I don't think that I would get along with them…it's just my personal policy*" (NH2_1). One individual even went so far as to create work-only accounts: "*I've gone like the whole step of, I have a whole separate set of social media that I use for work*" (NH21_1). Problem-focused management also occurred when entering into a potential tension-inducing situation: "*I think for me, my friendships always have come through work, and the only time I've ever had to talk about them was when I was managing the people. You know and sort of setting the ground rules*" (NH10_2).

Characteristics that facilitate a problem-focused response. What might facilitate some individuals to cope with the problems that elicit virtual coworker friendship tensions and others not? Although it is largely an empirical question for future exploration, the data are suggestive of a few key individual differences at play. The first such characteristic is an individual's orientation to interpersonal relationships (i.e., relational identity orientation; Brewer & Gardner, 1996; Brickson, 2000; Cooper & Thatcher, 2010). One of the most common tactics for problem-focused coworker friendship tension management was to completely separate the friendship relationship from the working relationship. For example, when first describing his view of coworker friendships, this individual stressed the business side of it: "*I think there's two things in [a] co-workers' relationship; one is you can be friends, but you're also working for a company so it's a business relationship*" (NH5_1). When recounting generally having to have hard conversations with coworker friends, he continued at time 3, "*It doesn't even*

bother me. It's a business…They may take it personal, right? And you know, the point is not to be personal, but 'look this is what the business expects us to do. I'm getting measured against it. You're getting measured against it. We have to deliver"" (NH5_3). Others, however, spoke of not separating the relationships at all – the friendship and coworker relationship were completely intertwined until a latent tension was made salient, and then they had to work through the discomfort:

> *I kind of see them as one relationship. For me, I'm the type of person that if I care about somebody, I just can't really turn that on and off. I tend to be a more extrovert-type of a person, and someone that gives compassion and cares about people, and people's situations.* (EH12)

The data thus suggest that, to the extent that individuals are relationally oriented (i.e., they tend to define themselves in terms of their interpersonal relationship; Brewer & Gardner, 1996, Brickson, 2000), problem-focused coping may be more difficult. The more that individuals can separate their personal relationships from themselves and the work that needs to be done, the more likely they can eliminate the source of the incompatibilities between the coworker and friendship relationships through separation.

Another possible individual difference that emerged as predictive of problem-focused coping was an individual's resilience, that is, an individual's ability to grow and move on from stressful challenges (Stephens et al., 2013). The importance of this characteristic was best captured by the following two individuals, the first of whom described being able to let go and move on to manage the cause of the potential virtual coworker friendship tension:

> *I'm generally the type that if I have a fight or disagreement or whatever it may be, when it's done I'm pretty much done with it and I move on…To kind of understand that I'm not sitting there dwelling on it and I'm not going to let it change the way that I operate so [I] might as well move on.* (NH21_1)

The second individual illustrates how a lack of resilience leads individuals to linger in an iterative cycle of experiencing coworker friendship tensions:

> *And in some situations—I've seen that—I've seen people carry a chip on their shoulder. Sometimes when they are colleagues and then they resent having to work for that colleague now because there's a certain degree of familiarity and certain norms.* (EH24)

The data also suggest past negative experiences with coworker friendship tended to characterize those who took a problem-focused coping approach. From experiencing detrimental outcomes in past coworker friendships often arose the foresight to avoid making the same mistakes:

> *I don't become friends with people unless they are top notch because it made it too difficult on them and myself. The few times that it happened that they weren't, it was very difficult. I had to cut the cord and stop being friends with them.* (NH10_2)

> *We worked together really, really closely, and we became really good friends. I think it came to the point where it was too much small talk or fun before accomplishment…You know, I guess the people that I'm the most friendly with are not folks that I work with directly. They'd be folks that I've worked with in the past, and then our roles change a little bit. That opens up the ability for us to know each other.* (EH27)

The final emergent quality that the data suggests prompted individuals to take a problem-focused coping approach was virtual social intelligence, the same competency that enables one to more easily and proficiently forge virtual coworker friendships. For example, this informant described a situation in which he was on a conference call with many others and the managers running the call were overly friendly with one another: "*I think you have three vice presidents talking, and they talk to each other like their golfing buddies…That's where it's a little awkward because they're talking about things you don't even know why they're chuckling*" (NH22_1). Of the two components of relational

digital fluency, virtual social intelligence appeared particularly important to predicting whether tense situations were managed through emotion or problem-focused coping. This was perhaps best illustrated by an informant who struggled with virtual social intelligence, landing him in an interactive cycle of virtual coworker friendship tensions:

> *That's, generally speaking, been my biggest [issue] is I talk a lot. I will insert myself into things I probably shouldn't. But I will be the first one to reach out and say, "hey listen; we tend to be competing for the same dollar. Let's see if we can find a way to work together, okay?" Then, generally speaking, that sort of thing usually works.* (RT9_1)

In sum, the basic process of virtual coworker friendship tensions largely unfolded in the same way as tensions experienced in a co-located context (i.e., shock, discomfort, management). Perhaps most interesting, though, were the various ways in which the virtual context transformed the way each component of the process was experienced. I will now describe the impact of virtuality on these coworker friendship tensions.

The impact of virtuality on the coworker friendship tension process. In this section, I will more deeply flesh out the impact of virtuality on the coworker friendship tension process. At a high level, the data suggest that the virtual work context had a significant impact on the frequency with which individuals described experiencing coworker friendship tensions, the types of shocks that provoked these tensions, as well as how the tensions were managed. Further, as scholars have found, relational processes within organizations are often subject to influence from multiple levels of analysis (e.g., Dutton, Workman, & Hardin, 2014; Lilius, Worline, Dutton, Kanov, & Maitlis, 2011). Figure 3 depicts the ways in which virtuality influences the organizational, relational, and individual levels of analysis, which ultimately impact the frequency of, types of shocks

that provoked virtual coworker friendship tensions, and management of virtual coworker friendship tensions.

Impact on frequency of provoked tensions. Virtuality exerted a substantial influence on the extent to which individuals identified tensions in their coworker friendships. The three most significant ways in which virtuality impacted the frequency of provoked tensions were that it facilitated a climate for task-focus, increased psychological distance from coworker friends, and reduced perceived role conflict between the friend and coworker roles. Overall, the data suggest that these effects reduced the frequency of virtual coworker friendship tensions when compared to in-person coworker friendships. This emerged as individuals often made comparisons between those who they consider to be largely virtual coworker friends, friends from past co-located work experiences, and friends from Cloudly with whom they have regular face-to-face contact. Table 2 summarizes these important distinctions and I will now describe their genesis.

Climate for task-focus. I earlier described in my findings the need for "relational informalization" to help overcome the "barrier of virtuality" that challenged the virtual coworker friendship formation process. I noted that virtual interactions were largely perceived as more formal than in-person interactions. My data suggest that virtuality contributed to an organizational climate for task-focus that made it less likely that individuals would forge informal relationships with one another:

> *I would say it's [working virtually] probably in all honesty made me more productive. Because you know and I don't want to call those a distraction but I'm not I'm able to focus more on the task at hand at times… it's kind of forced me to take breaks that would have occurred naturally when you're working within the*

> *same office or that. But those just don't happen naturally when you're working virtually*. (NH18_1)

Informants described how the climate for task-focus also made it more likely that individuals prioritized their formal working relationship over an informal virtual coworker friendship: "*it seems to be that everybody gets into this, you know, business factual thinking mode whenever there's a virtual meeting*" (NH22_2). The result of this climate for task-focus was a reduction in the frequency with which individuals experienced virtual coworker friendship tensions. Indeed, this very same informant responded to the interview prompt about his experience of tensions in vitual coworker friendship with, "*No, I mean no, there hasn't been any…I haven't – no*."

Increased psychological distance between coworkers. It is perhaps not surprising that, at the relational level, virtuality also created greater psychological distance between coworkers as they had to work through the barrier of virtuality to get to know one another. This distance also impacted the frequency of virtual coworker friendship tensions, making them far less common: "*In the past I have [felt tension]. But it was my job where I worked face to face. Being remote, no, I don't know them well enough for it to actually matter*" (NH12_3). This was echoed by another informant who noted that he had not experienced tension "*in a virtual setting, but I have a particular co-worker friend that I interact with directly and it kind of feels awkward and I don't like that.*"

This psychological distance also held true for reporting relationships. Indeed, decreased supervisory monitoring is a hallmark of virtual organizations (Rockmann & Pratt, 2015). With greater space from management, one of the most contentious types of friendship relationships in an organization, that between a supervisor and a subordinate,

was less apt to form. Even when they did form – which was much more likely when individuals were peer level first and then a role shift occurred – informants described separating the relationships (i.e., problem-focused coping) to be easier. They accordingly noted that tensions that might otherwise exist, were infrequent:

> *The way we work with our managers, there's not really much special privilege to have…We're very much independent. Our supervisors are there more just to approve payroll and vacations and to be somebody to go to if we're having an issue with a customer.* (EH19)

> *I was able to segregate it [the friendship and being a friend's manager] a lot more than had that person been in the office.* (NH14_1)

Reduced role conflict. At the individual level, informants generally described how working virtually also reduced the potential conflict between their coworker and friendship roles because relationship partners did not usually share the same work surroundings. This enabled individuals to introduce content into the coworker friendship that might otherwise be taxing to the relationship: "*Well it's just nice to know that somebody's out there that gets it…Just like, 'oh, the girls say this, this, this, and this,' and you're very distant from it*" (EH8). Similarly, another informant described the psychological distance when reflecting on why he did not experience tensions in his virtual coworker friendships: "*I think [being virtual] helps because there is a little bit of anonymity where we're not physically in the same location…There's a certain level of, 'hey, this is going on in my office,' with distance, it helped that along*" (NH22_1).

Impact on types of shocks that provoked tensions. Although informants commonly spoke of less frequent experiences of tensions in virtual coworker friendships, as previously shown, these tensions were still very much present in the virtual context. Key attributes of the virtual context, namely intensified organizational silos, increased reliance

on CMC, and reduced in-person interactions with others, impacted the types of shocks that elicited virtual coworker friendship tensions such that certain tensions were felt more or less often when working virtually.

Intensified organizational silos. As noted, shared tasks are an important predictor of virtual coworker friendship (Sias et al., 2012). It thus became apparent that, although Cloudly was a very large organization, virtuality intensified organizational silos such that individuals often only had the opportunity to interact with those with whom they shared tasks. Consequently, the data suggest that virtuality imposed a limited potential friendship pool on informants.

> *[Virtual workers] are so separated from each other that they don't even hang out. A guy said that he lived down the street from somebody that worked in the same company for six years and didn't know it.* (NH12_1)

Because of this more concentrated overlap in coworker friendships with work-related interdependencies, certain types of tension were seemingly more prevalent in a virtual organization. Most noticeably, those who did describe virtual coworker friendship tensions frequently told stories of competing with one another over a role. They also often spoke of a role shift in which one friendship partner became the manager of the other. These tensions appeared particularly prominent for many role transitioners at time 1, who were often transitioning from peer-level with a coworker friend to a reporting relationship:

> *I've went for roles which you know there's other Cloudly going for them as well, which causes a strain to the friendship because you're competing for a role. You can be friends and you can kind of talk about it but that type of thing does definitely impacts the relationship, there's no doubt….I did go for promotion towards the end of last year and did not get it. They [the friendships] haven't rebounded to that same level*. (RT10_1)

> *So I have to be a little bit more cautious with that because I do have to maintain a little bit more of a level of professionalism. I have to make sure I maintain the respect level so that when I do actually need to put my foot down, or if I need to get something relatively quickly that I can get a correct response rather than the kind of "buddy buddy" friend type of a response.* (RT11_1)

In short, the intensification of organizational silos because of virtuality made the very large organization feel small, increasing the extent to which informants described competing with coworker friends over internal job openings or becoming a friend's boss. This intensification of silos was implied by an informant when describing what it was like to compete against coworker friends for internal job positions: "*The interesting part about Cloudly is the benefits and the negatives of the [job] candidates seem to be well known amongst everyone…I haven't figured out whether that is good or bad*" (RT6_1).

Increased reliance on CMC. Unique to virtual coworker friendships, informants described how relying almost solely on virtual media to communicate with each other often strained their relationships. While miscommunications can surely happen in non-virtual coworker friendships, informants suggested that the extent to which coworker friendship tensions reflect miscommunications is likely enhanced in a virtual context. Indeed, the lack of social cues communicated through CMC made miscommunications prominent:

> *I mean things can get lost on chat, they can and do. You know, sometimes you'll say something, and then it just doesn't go right, and you say, "oh forget it!" You try to make a joke, and now it's just [taken] a hundred million ways, never mind.* (EH23)

> *I started working a proposal with one of the account team members that was going to be a fairly large deal. We started to have a bit of a communication breakdown where I was trying to get answers to be able to report to my management, and I was getting nothing. As friendly as we had been with each other, he wasn't responding to the things that I needed… I think that's probably the hardest thing, is whether it's tone, whether it's time sensitivity, or whatever, I*

> *think miscommunication through digital interaction or virtual interactions is probably the biggest thing to overcome.* (NH21_3)

Further, personally connecting with virtual coworker friends through CMC presented other unique challenges. As discussed in the section on relational informalization, virtual workers craved personal information about potential coworker friendships yet social media often became the source of virtual coworker friendship tensions. Indeed, because it is so easy to connect via social media sites like Facebook and Instagram, informants often attributed coworker friendship tensions to social media:

> *It's a little bit awkward, especially when they add you on social media…So you kind of just hide some of the stuff, just in case. And then Twitter, I made that private, and created a professional one, just in case*. (EH14)

Virtual solitude. By stripping away a great deal of what makes work organizations social – the in-person time spent with coworkers – it became apparent that the nature of these tensions morphed. Because informants frequently worked out of coffee shops, their home offices, or at customer sites, they often described feelings of solitude:

> *Well, it's like being stranded on a desert island. After a while, I think just human nature, you crave the interaction, the social interaction with other people…so I have found myself doing conference calls from the Wal-Mart, just so I could walk around and say, "how are you doing?"* (NH11_1)

At the same time, though, this virtual solitude meant that others were generally not around to prompt or witness others' coworker friendship tensions – "*some days I could go a day or two or whatever without contacting anyone*" (EH15). Consequently, this lack of social interaction changed the content of the tensions such that dynamics like favoritism or cliquishness were largely absent – "*If [Mike] was in this office, and we were hanging around all the time, then yeah, I think it would get uncomfortable where people would go, 'why do you hang out with that guy [Mike] a lot?'*" (RT3_3). Indeed,

witnessing others' coworker friendships was a somewhat likely phenomenon in a co-located context that provoked tensions, but was contained to the relatively infrequent face-to-face meetings in virtual organizations:

> *It's not [just that] you are uncomfortable, but a little peeved. You are sitting there working, and somebody is chitchatting or whatever, and you say "you know, you could do that during lunch or whatever. Why am I working when you aren't?"* (EH15)

> *When there were big group gatherings, and there were new people in our virtual teams, and we knew each other so well that it was clear. Actually, there were three of us that kind of got close in this district to where I think it was uncomfortable for others…Although right now I'm coming into that situation, so I'm seeing those friendships that are there…I'm seeing the uphill climb that I have before people will let me in.* (NH22_1)

Fewer in-person interactions with others also led to being generally less clued into the relational dynamics of the typical office politics, making coworker friendship tensions less likely to revolve around some of the tenser subjects of a co-located environment:

> *You're really not in the thick of office politics or other things. When you do come back into the office or when you do meet with someone you're really not part of any of that stuff that goes on. So I don't really feel that there's any awkwardness with anyone that I work with.* (RT2_3)

Impact on management of provoked tensions. In addition to influencing the frequency and types of shocks that elicited the coworker friendship tensions, virtuality also changed the way informants described managing the provoked tensions.

Fewer relational resources. As explained, the overall likelihood of implicating others in coworker friendship tensions was reduced when employees worked virtuality. The autonomous environment of a virtual organization made this particularly true of managers outside of the virtual coworker friendship. It became evident through my interviews with managers that the dynamics of virtual coworker friendships were

somewhat of a black box for them – they generally knew that their team members forged friendships, but did not know how:

> *I do see them connecting, but I don't know how they approach it. I see it happen though. It's evident because when I'll talk to somebody, they'll back reference what I consider to be their buddy. You know and say, "I can't do this but I know so and so is great at doing this"…And so, I kind of connect the dots and I can see that there are some people that do develop some friendships on my team.* (EH3)

Managers were also described as an unlikely organizational resource for resolving an interpersonal conflict as they were often not privy to these interpersonal relationships. In the rare case that a manger got involved, informants portrayed it as awkward, such as the situation described above in which the informant had a miscommunication with a coworker friend over a proposal, "*so it ended up getting escalated up where you got broken communications with managers…it was a little awkward bringing in bosses to kind of prompt some active communication*" (NH21_3). One manager even described how much more difficult it was to do any sort of training, like managing coworker relationships, when employees worked virtually: "*I don't think communication is as good with the virtual employees…for me it's more difficult to train people and explain things*" (EH9). All of this suggests that managers, and perhaps the organization as a whole, are less likely to provide resources, such as support when they notice something is off, for helping coworkers manage their friendship tensions.

Reduced face-to-face tension management. Dynamics at the relational level also significantly impacted how tensions were managed virtually. While individuals might be forced to confront the tensions because it is more likely they will see a coworker friend in a co-located context, the virtual context provided individuals the latitude to experience and manage the tensions unilaterally. For example, this informant described how she was

asked by a coworker friend (who worked in another office in the same state) to help her with her work, to the point that she was having trouble managing her own workload and was forced to confront her friend in-person. She then noted, "*And it's really easy, virtually, to kind of push that stuff away and not have to address it. I think if that would have been something virtually, it's easier to ignore probably than to address it*" (EH6). Likewise, this informant expressed how he "*tended to avoid it [tension]*." When asked how, he replied, "*I just don't respond to the email*" (EH10). And another individual recounted:

> *I have a mute button. So, when you say something or do something on a call, I can mute it and I can release my frustration there. Therefore, it doesn't fester. When you're in a conference room and you have your friend sitting across the table, and he just said the dumbest thing you've ever heard, or I just said the dumbest thing that could be possibly said, in front of the customer, there is no mute button. There is no getting out of that situation. You are stuck there, face to face, and that usually leads to coming out of a room, going separate ways for some time. Whereas virtually, I have the mute button and I'm going to hit mute and I'm going to go, "what the [heck] are you thinking?" And then it's out and I'm done.* (NH11_1)

That said, because of the lack of social cues communicated through CMC, managing tense situations virtually was noted by some as trickier, prompting most informants to prefer hashing these tensions out in-person. For example, this individual explained how she and a coworker with whom she was friendly competed for the same role, with the informant ultimately becoming her manager. She depicted the situation as, "*kind of uncomfortable at first when I got the position and then she had to report to me. I think there was a little bit of discomfort from both sides…a little bit of norming, storming, performing*" as they figured out how to best work together (EH4). She further noted that they managed the discomfort by going, "*out for lunch together a couple of times and we*

were like, 'you know, let's put this work stuff away and let's talk about other things."" Ultimately, the two were able to successfully work through the tensions as they experienced them, facilitating a deeper friendship. However, the lack of in-person contact in a virtual world often made this impossible, heightening the difficulties of managing virtual coworker friendship tensions:

> *It makes it harder because a lot of times when you're virtual, if you hear something, you're hearing something from someone over the phone. And you're not able to get it, or you're not able to triangulate what's going on. It's a lot easier when you can look somebody in the eye and say, "what's going on? Really? It was that bad? Well, no not really. Okay, so you're being over dramatic."* (RT9_3)

Increased need for relational digital fluency. Finally, at the individual level, managing coworker friendship tensions necessitated a different set of skills than managing tensions in-person. This is not surprising given that I previously suggested that those who were able to address the source of tensions and better stave off future potential tensions likely also exhibited a central component of relational digital fluency, virtual social intelligence. While in a co-located context, understanding how to properly interpret and convey social cues through digital media was less important because individuals had the opportunity to diffuse tension in person, when working virtually, relational digital fluency was a necessary means to successful tension management:

> *You try and be as clear as you can when you communicate but ultimately these things [tensions] happen and you just kind of have to know the proper channels to get things resolved when you're communicating.* (NH21_3)

Without relational digital fluency, it was more likely that individuals would continue to experience tensions – or even cause them to surface, such as the informant quoted earlier

who frequently inserted himself into virtual conversations that were not necessarily relevant to him.

Implications of virtual coworker friendship tensions and their management. As is evident, the virtual context significantly affected how coworker friendship tensions were experienced and managed. But why does understanding these tensions and how they are managed in a virtual world matter? As hinted throughout this findings section, these tensions often led to detrimental consequences for individuals:

> *So we got into situations where it was stressful and the job was in the middle. And so we had different viewpoints on how to tackle business situations…It just felt exhausting. Whereas other friendships that didn't have that complication aren't exhausting. I mean, they're rewarding. I mean you feel, gosh, I was in the dumps down before, but now I feel rejuvenated. I'm gonna go off and do my job, stop crying, whatever. But that friendship, that complicated one, I never really felt that sense of – that sense of kind of rejuvenation.* (EH3)

They also changed the nature of coworker relationships: "*Essentially you have to just hit reset. So now you're back at square one…it might have been me that made the stupid decision, it might have been the other person but you're kind of back to being just friends or just acquaintances and you've got to start building that trust all over again*" (EH22).

Further, even when individuals attempted to manage the tensions, they occasionally ended up just being too much to handle. In such cases, either the virtual friendship or coworker relationship had to be severed for the tensions to subside. As the informant who felt depleted as a result of these tensions explained, the continual discomfort he felt motivated him to begin looking at positions elsewhere within the organization: "*My hope is by doing that [changing departments], and having that complete separation, that maybe I can then go back and have more of a…relaxed friendship with this person. As opposed to the complicated one*" (EH3). This sentiment

was echoed by another individual, who wound up severing the friendship after experiencing irreconcilable tensions over a deal that was perceived as unfair to his friend: "*They lose trust because they got 'screwed on a deal.' The small talk stops and it just reverts backwards from like a combination of a partnership and a friendship just back to a partnership. Like a business relationship…it can be awkward*" (EH16).

Interestingly, the very same relationships that often sparked uncomfortable situations demanding resolution were also described as those relationships that helped them get through the discomfort, largely because of the tensility (i.e., the ability of the relationship to withstand strain; Dutton & Heaphy, 2003) that characterizes friendship: "*If you think about it, if you have a personal relationship, you're more likely to recover from tough situations faster. People know underneath you have a good relationship*" (EH18). Perhaps most surprising, these tensions even sometimes strengthened the coworker friendship: "*I guess it is for the better because then, you know, we kind of understand, okay, new boundaries. Like we're all in this transition period right now. It helps to be like, 'you know, this is how things are now'*" (EH6). This was echoed by another informant who described a recent example when he was driving and couldn't pick up his phone, then, for various reasons, neglected to answer subsequent attempts to reach him. His closest coworker friend, with whom he was in constant touch with virtually, "*felt like he was ignored a little bit and [said], 'don't you do that again.* "' The informant continued, "*But then I'm glad that happened because now he knows that unless there was a reason, it would not have happened. So that trust level went up after that. We're better buddies now*" (RT12_2).

In sum, my findings suggest that the virtual context exerted a unique influence on coworker friendship tensions. While they were generally experienced to a lesser extent, virtuality also impacted the form tensions took when provoked and how tensions were managed. As I will discuss next, these findings bring to light numerous theoretical implications, specific practices that managers can implement to benefit their organizations, and directions for future scholarly research.

CHAPTER 5

DISCUSSION

I began this dissertation by illustrating the importance of understanding virtual coworker friendship, particularly given the rapid increase in virtual work. My research contributes to our understanding of how individuals form and maintain virtual coworker friendships, particularly in the face of tensions that underlie these relationships. Research Question 1 posed, "*How do the dynamics of virtual coworker friendships unfold over time, and what are the outcomes of virtual coworker friendships?*" My findings suggest that friendship formation in virtual contexts is hampered by a "barrier of virtuality." This barrier made it harder for individuals to get to know coworkers informally, rendering the coworker friendship formation process more challenging when working virtually. To circumvent this barrier, my findings suggest individuals employed two sets of activities – presence bridgers and relational informalizers – and exhibited one set of competencies – relational digital fluency. Presence bridgers, such as revealing identity and learning through alternative information sources, helped individuals fill in the social presence gap that communicating primarily via technology created. Relational informalizers, such as personalization, transformed the coworker relationship from a formal, work-based connection to an informal relationship that engendered the ability and desire to care for one another beyond work. Relational digital fluency enabled individuals to comfortably and easily maintain virtual coworker friendships. The extent to which managers set the stage for individuals to engage in these facilitators also influenced the frequency with which informants described forging friendships with their virtual coworkers. And, finally,

individuals also maintained the virtual coworker friendship by continuing to demonstrate the identified facilitators.

As noted, this research question was predicated on the assumption that the "traditional" antecedents of workplace friendship, such as similarity, personality, and a context that supports coworker friendship, were present. So how is the virtual coworker friendship formation process impacted if this assumption is relaxed? The data suggests that, to form virtual coworker friendships, both the traditional antecedents and the emergent facilitators are necessary, but neither are sufficient on their own. Take, for instance, this new hire, who did all the right things to form virtual friendships, such as trying to presence bridge through face-to-face interaction, "*I find myself trying to wedge my way into more events and get myself a little bit more face time…. I'm hoping that strengthens relationships and I can kind of move into a little bit more personal relationships*" (NH21_1), and informalize relationships by personalizing, "*I do have several relationships that have been opened and have developed along*" (NH21_2). He also described his own relational digital fluency when reflecting upon past coworker friendships, even in highly virtual roles: "*At all of my previous roles in the companies that I worked at, I've developed some lifelong friendships with some of the people that I worked with.*" But by our third interview, he was frustrated that he had yet to truly click with anyone and form an intimate friendship. Through the course of our conversation, it came to light that the two arguably most important predictors of friendship, namely shared interests and value similarity (Boyd & Taylor, 1998; Ingram & Zou, 2008; Sias & Cahill, 1998), were lacking. Consequently, no amount of presence bridging, relational informalization, or relational digital fluency could transform his coworker acquaintance

relationships into coworker friendships: "*I really don't feel like it's me. I feel like I've done everything that I can*" (NH21_3).

Research Question 2 asked, "*How, if at all, are virtual coworker friendship tensions experienced and managed over time, and with what effects?*" Interestingly, the data suggest that the virtual context did not play a central role in the basic process of virtual coworker friendship tensions. To be sure, informants described tensions that often remained latent until made salient by a shock to the relationship. They articulated the subsequent discomfort and awkwardness caused by the salient tensions, and then how they responded to the tensions through problem-focused or emotion-focused coping. My findings also suggested characteristics of those who might manage their coworker friendship tensions through problem-focused coping, such as individuals who are more relationally oriented or have experienced negative consequences from past friendships.

That said, the virtual context did exert a unique influence on the organizational, relational, and individual levels of analysis which, in turn, impacted the frequency, types of shocks, and management of virtual coworker friendship tensions. In general, the psychological space granted by virtuality led informants to describe fewer tensions in their virtual coworker friendships. However, when these tensions were experienced, they were often prompted by virtual-specific stimuli, like miscommunications from communicating via technology. Informants also illustrated how managing virtual coworker friendship tensions was also harder than in a co-located context, largely because individuals were unable to diffuse the tensions in-person.

What might explain the discrepancy in the extent of the virtual context's influence on friendship dynamics? Although purely speculative, Research Question 1 aimed to

better understand a dynamic in which friendship was being built through computer-mediated communication. Research Question 2, though, assumed the existence of coworker friendship and explored the dynamics of a phenomenon embedded within it (tensions). Based on this difference, a plausible explanation is that phenomena that require establishing intimacy and closeness are more greatly impacted by the forces of virtuality. However, once intimacy is established and individuals have a sense for who their interaction partner is, communicating through virtual technologies – even in the face of relational challenges – is experienced as easier and more similar to communicating in-person. While it is a question for future research to unpack, my data preliminarily support this notion. For example, this individual describes why using a richer form of communication media is unnecessary for a coworker friend he knows well: "*the video feed is not as important as if it wasn't a solid relationship. If I only saw him once a quarter, having a video feed would be more important than the fact that I've known him for seven years, have been out with him, and we've gone places*" (EH5).

Contributions to Theory

My findings not only build new theory on virtual coworker friendships, their tensions, and management, but they also integrate existing research on workplace relationships, virtual work/computer-mediated communications, and organizational tensions to offer new insights into both theory and practice.

Contributions to the literature on relationships at work. We know a lot about why and how individuals become friends in "traditional" workplaces (Fehr, 1996; Fine, 1986; Kram & Isabella, 1985; Sias, 2009; Sias & Cahill, 1998). We know far less, however, about these same questions in a work world mediated by virtual communication

technologies (Colbert et al., 2016b; Halbesleben, 2012; Okhuysen et al., 2013). While past research has acknowledged that remote employees are motivated to personalize relationships by finding and communicating social cues, often forming highly personalized relationships, including friendships (Sias et al., 2012; Walther, 1992, 1995), we have lacked insight into the specific ways that individuals foster these highly intimate and voluntary virtual relationships. This literature has also remained largely silent on the nature of coworker friendship tensions in a virtual setting, relying primarily on one cross-sectional study of close friendships in a non-virtual organization to understand them (Bridge & Baxter, 1992). By exposing the difficulties that individuals described in their quest to become better friends with virtual coworkers, articulating the three sets of facilitators needed to successfully overcome such difficulties, and illustrating the implications of virtuality on the frequency, provoking shock, and management of virtual coworker friendship tensions, my dissertation provides a richer and deeper understanding of how the changing nature of work influences the ways in which people relate at work.

Most obviously, this study deepens our understanding of the dynamics of friendship at work. One of the biggest strengths of my study was its longitudinal design. Because I studied individuals over time, I could discern the subtleties of virtual coworker friendship formation and coworker friendship tensions that have gone largely unarticulated in prior work. First, research has begun to emerge that suggests potentially deleterious consequences of friendship at work, with scholars labeling coworker friendship tensions as a potential cause (Methot et al., 2016; Sias & Gallagher, 2009; Sias et al., 2004). My findings indicate that these tensions do not necessarily impact both the friendship and coworker relationships negatively. Instead, glimmers of positivity may

result from these tensions, such as better delineating the boundaries of the relationship going forward (cf. Battilana, Sengul, Pache, & Model, 2015). These positive outcomes, though, are largely contingent on being able to temper the awkwardness or negative implications of the virtual coworker tensions that may arise.

Additionally, by explicitly focusing on friendship formation (a highly personalized relationship) in the work context (a highly formal environment), my findings both unite extant research on personalizing relationships at work and extend that research, ultimately articulating a holistic model of how coworker friendship emerges in a virtual work environment. To be sure, Research Question 1 builds on previous work acknowledging the importance of conveying social presence through CMC (Short et al., 1976). It also highlights that the communication of social presence alone is not enough to form a virtual coworker friendship. While implicit suggestions of informalization exist in the communication literature (e.g., signaling the desire for repeated interaction is important for personalizing all virtual relationships; Christen, 2013), this literature has yet to be fully integrated with that of social presence.

My study also identified digital relational fluency as crucial to virtual coworker friendship formation. Relational digital fluency differs from digital fluency (Briggs & Makice, 2012) and virtual intelligence (Makarius & Larson, 2017) in that the latter two constructs capture an individuals' ability to use virtual media (what I have termed "media proficiency"), while the former also captures "virtual social intelligence," or one's ability to read virtual interpersonal situations and cues, and then accurately respond to them. While relational digital fluency is certainly helped by experience with particular communication media and also interaction partners, as noted by channel expansion theory

(Carlson & Zmud, 1999), my findings suggest that experience with a medium is not enough to engender successful virtual coworker friendships. Rather, individuals have an overall level of proficiency for encoding and decoding virtual messages to form and maintain effective (and positive) relationships unrelated to familiarity with a particular medium. Relational digital fluency is, therefore, inclusive of both digital fluency and virtual intelligence, but goes beyond them by focusing explicitly on the relational competencies needed to form and maintain virtual coworker friendships.

Finally, although the focus of this study was on workplace friendships, it is likely that my findings apply to many other types of workplace relationships. For example, the foundation of any coworker friendship is a positive relationship at work (Dutton & Ragins, 2007), suggesting that the emergent facilitators and ways of managing virtual coworker friendship tensions might equally apply to the development of positive relationships at work. That said, my findings are specific to friendship in particular, a voluntary and personalized relationship marked by high levels of self-disclosure and communal norms. When forging other types of organizational relationships (e.g., advice relationship) it is likely that individuals must enact additional facilitators (e.g., seeking advice, ingratiation) while perhaps relying less on the friendship facilitators (e.g., relational informalization). Similarly, with a more solid understanding of the differences in how coworker tensions are experienced and managed in virtual contexts (as expanded upon below), we can begin to extrapolate virtuality's impact on other types of organizational tensions, with future research further refining these ideas.

Beyond specific contributions, my findings suggest a greater need for organizational relationships scholars to better integrate their work with that of

communication scholars. As the nature of organizations and workplaces shifts to highly virtualized, employees' interaction patterns are also shifting (Bartel et al., 2012; Jarvenpaa & Leidner, 1999; Rockmann & Pratt, 2015). Communicating via technology changes the way organizations are experienced and work is done. Because much of organizational behavior scholars' understanding of workplace interactions assumes face-to-face interaction, this raises the question of the applicability of our theories in contexts without face-to-face interaction.

Contributions to the virtual work literature. This study also furthers our knowledge of virtual work by articulating how employees form and maintain effective virtual working relationships. I noted earlier that Walther (1995) found that individuals exhibited more affection in initial virtual communications than in face-to-face communications. Not surprisingly, over time and with many interactions, studies have shown that levels of intimacy and trust in virtual relationships can match those in co-located contexts (Jarvenpaa & Leidner, 1999; Wilson et al., 2006). However, what my emerging theory submits is that it is the content of these interactions – and not necessarily the number of interactions, length of time through which individuals act, or use of a particular communication medium – that matters most. Those who infused their communications with cues that bridged social presence, informalized their relationships, and were adept at forming and maintaining such friendship by exhibiting digital relational fluency were far more successful in establishing coworker friendships than those who did not. Consequently, these findings suggest the need to go beyond our traditional understanding of virtual relationship development at work to better appreciate the potential for additional factors that influence interactions mediated by CMC.

Further, I speculated earlier in this Discussion section that building intimacy was hampered by virtuality more so than subsequent relational processes, such as experiencing and managing virtual coworker friendships. This informs the literature on virtual work by signaling that virtuality does not exert the same amount of impact on even the most seemingly related processes, such as coworker friendship formation and tensions. From this finding, researchers can begin to understand the differential impact virtuality might have on various phenomena in a virtual workplace.

Additionally, the emergence of imagination as a mechanism for transcending the "barrier of virtuality" has particular importance for the literature on virtual work. As suggested by the Social Identity Model of Deindividuation Effects (SIDE), in the absence of face-to-face interaction, social context cues conveyed through virtual communication media take on aggrandized importance, often sparking a salient social identity (Postmes et al., 1998). However, my data suggests that, unlike research suggesting that employees' motivation to form an impression of coworkers is reduced in a virtual context (Johri, 2012), virtual employees do have a strong need to visualize interaction partners so that they are able to forge a personalized relationship with the individual. So strong is this need that individuals often formulate an entire imagined persona based not on a singular salient social identity, but a bricolage of them. In this way, imagination is a not yet previously identified way of lessening "situational invisibility," or the lack of situational knowledge about each other that remote workers face (Cramton et al., 2007). That said, these visualizations may lead to potentially biased ways of interacting, given that the person is merely a figment of one's imagination.

This study thus builds a foundation from which future research can continue to examine when these figments of imagination are beneficial or when they are potentially harmful. For the most part, when informants described no difference in how they interacted or worked with coworkers once they met in person and their incorrect visualizations were rectified, their visuals were largely centered on superficial characteristics, such as height, age, hair color, and whether the person wore glasses; as this informant noted, "*Not necessarily about the person, but just about what their appearance would be*" (EH19). However, it is likely that when visualizations aroused incorrect assumptions about more deeply-rooted characteristics, such as the informant who assumed ways of interacting based on cultural norms and described how rattled he was when meeting a coworker friend who he had thought to be Indian but looked Chinese, such figments of imagination were less innocuous. By identifying imagination as an important mechanism, then, virtual work scholars can better understand how individuals reduce the "situational invisibility" that virtual workers often face (Cramton et al., 2007).

Contributions to the literature on tensions in the workplace. Finally, this study also contributes to the literature on tensions in the workplace. While we have a solid base in the literatures on stress/coping, paradox, and dualities (Fang, Duffy, & Shaw, 2011; Lazarus & Folkman, 1984; Lewis, 2000; Putnam et al., 2016; Schad, Lewis, Raisch, & Smith, 2016) from which to extrapolate the dynamics of coworker friendship tensions, my findings illustrate meaningful differences between the ways that tensions were provoked, experienced, and managed when coworker friendships were virtual versus in a

co-located workplace. From these findings, tension scholars can begin to better understand the nuances of how tension processes translate in a virtual world.

Additionally, by stripping the in-person social interactions of a co-located context away from the study of virtual coworker friendship tensions, important insights emerged. The first is that coworker friendship tensions are not only experienced dyadically. Rather, these tensions are inherently experienced socially, particularly in the organizational context. For example, this informant spoke about how she often felt like she was in the middle of two coworker friends: "*Because they would each kind of bitch about the other person. I just wanted to be like, 'oh, I don't like this.' I would even say things like, 'you guys better figure out how to be workplace colleagues. You gotta figure this out, because this is not cool. I like you both, but I don't like this*" (EH12). Thus, perhaps the most pernicious aspect of the social nature of these tensions is their likelihood of contagion, especially when interaction is in-person. Take, for instance, this individual who described seeing coworker friendships go south, with some weighty implications:

> *I've seen people that have been able to establish a friendship but keep the boundaries of that friendship where it needs to be so that it doesn't get awkward and things happen that shouldn't. I've seen instances where that doesn't happen, and it can get pretty ugly then. You've got two people that they see each other walking down the hallway and them each doing a 180.* (NH18_3)

He continued: "*it can absolutely affect morale and the cohesiveness of the team and all that. Usually, those situations have a bit of a life of their own that just causes a lot of disharmony*" (NH18_3).

Finally, this lack of face-to-face interaction had critical implications for the coworker friendship tension process, and perhaps no aspect was more impacted than the greater likelihood of friendships being provoked when individuals were co-located. In

addition to the opportunity for these tensions to be prompted by the mere presence or interaction with those outside of the friendship relationship, it was clear that informants were also often affected by others' coworker friendship tensions, even as mere bystanders. These findings in sum suggest that virtuality may actually be beneficial for staving off coworker friendship tensions, perhaps even engendering a context in which the benefits of coworker friendship can be reaped without the potential drawbacks. That said, with the emergence of imagination as an important mechanism for sensemaking in a virtual world, it is plausible that some tensions might arise solely intra-psychically, as individuals are unable to see actual behavior first-hand; for example, the one informant who described being more suspicious of leader favoritism.

Implications for Practice

In addition to contributing to theory, this study also suggests key takeaways for individuals and managers in organizations. My findings elucidated how different it is to interact in a virtual context, particularly when individuals are building intimacy in their relationships. Individuals and managers should, therefore, strive to build intimacy between coworkers to the extent that being apart is no different from being co-located. This is likely particularly important early in working relationships. Moreover, informants frequently noted that face-to-face contact was the best way to build this kind of intimacy. However, the rise in virtualization suggests a decrease in these kinds of interactions. Although somewhat provocative, this suggests that the potential organizational savings from going virtual (e.g., cost, time) may be diminished by the challenges in establishing interpersonal relationships (Hinds & Cramton, 2013). In my own sample, informants often discussed the trend at Cloudly toward fewer in-person meetings because of budget

constraints and the negative implications this has had on interactions and, at a deeper level, morale. As prior research has also suggested, a tangible recommendation from these findings is to bring employees together in-person more, not less.

Further, given the differences in interacting virtually, organizations must learn to adapt the ways in which members relate to one another to ensure that they are still able to meet our fundamental social needs while working virtually. The three identified facilitators suggest concrete ways to do just that. Because coworker friendships have great implications for employee engagement, managers can train employees on the importance and use of presence bridgers and relational informalizers, and to help build individuals' proficiency in relational digital fluency. For example, managers might provide definitions and examples of each facilitator, or create role plays through which individuals can develop the specific competencies of relational digital fluency, such as by training employees on what various interpersonal cues, such as tone and personality, present themselves across various online communication media. Individuals can also develop their own relational digital fluency by practicing using virtual communication tools to build and maintain relationships, as well as by seeking feedback from others to better develop a more nuanced sense of how to discern cues and communicate with others. Given the significance of presence bridgers and relational informalizers in forging friendships, managers should also ensure that employees have access to the richest media possible, and that they feel comfortable infusing virtual meetings with social cues and appropriate information about themselves. This is perhaps most important when individuals are relying on their own imaginations to form an image of who their coworker is, as such images may be inaccurate and/or biased (Johri, 2012). Not surprisingly, it

would also help to train managers in how they can engage in such stage setting using the same identified methods.

Additionally, coworker friendships are an important source of organizational information and support (Colbert et al., 2016a; Jehn & Shah, 1997; Morrison, 2002). As noted, unlike in co-located contexts where individuals might have the opportunity to run into others in the hallway or in informal organizational spaces like break rooms or the cafeteria, in virtual organizations, work is often the basis for formation of coworker friendships (Sias et al., 2012). Consequently, individuals mentioned only becoming friends with those on their team or within their division because they never had the occasion to meet others. Thus, when the informal organization (the patterns of interactions not preplanned by the organization, including coworker friendships) is largely virtual, it is more likely to closely resemble the formal organization. This suggests that the informal organization may be lesser in magnitude than in co-located contexts as the opportunities to forge informal relationships are not as prevalent. However, research has found the informal organization to be as important in the functioning of the formal organizational structure, including key processes such as decision making, coordination, and the mobilization of resources (Lincoln & Miller, 1979; McEvily et al., 2014). It is thus likely that the informal organization, although lesser in magnitude, is equal in potential value in virtual contexts as in co-located ones, even, as Gulati and Puranam (2009) argue, compensating for the formal organization's shortcomings. Based on the findings of this dissertation, managers should create opportunities for informal relationship building between virtual coworkers that transcends tasks. They might, for instance, encourage employees to presence bridge across the organization through

internal offerings like Facebook or employee spotlights regularly communicated to others. They might also offer programs like a "virtual coffee house" or "virtual speed friendship making" during which individuals from throughout an organization can log into an online platform and chat informally with other organizational members. Perhaps most powerful would be greater opportunities for individuals throughout the organization to meet face-to-face. Indeed, given the intensity with which meeting in person can speed-up the development of a friendship, the recommendation for greater in-person events is a crucial one for all members of virtual organizations (cf. Hinds & Cramton, 2014).

And, lastly, the benefits of virtual coworker friendships are perhaps best realized when the relationship is not fraught with unmanageable tensions. A very tangible implication from my findings is that there are ways for individuals to manage their friendships such that potential tensions are not realized (e.g., avoiding a shock altogether, managing the potential tension prior to the shock). Moreover, ways of managing these tensions can be learned. For example, organizations can train individuals on the most common types of shocks to virtual coworker friendships identified in this study (i.e., role shifts, unmet expectations, and boundary violations) so that they can be handled effectively, or perhaps even avoided. For example, organizations might provide new employees with mentors who have successfully forged virtual coworker friendships. In doing so, mentors could impart their wisdom on how to form virtual coworker friendships and manage their tensions.

Transferability

As noted in the Methods section, qualitative scholars are perhaps most concerned with transferability, or the extent to which the present findings apply across contexts

(Lincoln & Guba, 1985). In order to facilitate judgments of transferability, I have provided a thick, rich description of my context, the "data base" (Lincoln & Guba, 1985: 316) from which other scholars can determine the applicability of these findings. There are, however, key characteristics of Cloudly that likely impact these judgments. I will thus highlight those characteristics of my research context that most likely exerted a crucial influence on my findings to enable others to best understand their transferability to other contexts (Shah & Corley, 2006).

First, my context was in the information technology industry, signaling that my informants had a baseline understanding of and experience with computer-mediated communication that likely surpasses individuals in other contexts. On the one hand, this is a strength of the study as it may have increased the apparentness of the virtual coworker friendship facilitators. On the other hand, this may have masked additional facilitators that individuals might employ when less well-versed in technology (e.g., writing notes, exchanging physical artifacts). Scholars conducting future studies examining virtual coworker friendship formation and maintenance should take this into account when applying my findings to different contexts.

Second, the level of virtuality also emerged as an important factor in how virtual coworker friendship dynamics unfolded. While all my informants worked virtually with their coworkers at least 50% of the time and were part of globally dispersed teams – or as this informant named them, "*distance virtual teams*" (NH22_1) – most were also members of hybrid virtual teams and but a few hours' drive from their assigned field office or other coworkers. For these high-intensity telecommuters who tended to travel with their coworkers or were within reasonable driving distance, friendships and tensions

more often emerged between those with whom they had in-person interaction than those with whom they did not. Although most virtual teams are hybrid in nature (Gibson & Gibbs, 2006; Gilson et al., 2015), it is likely that just having the chance to meet in person exerted an influence on my findings. Further, as mentioned, my context did not regularly utilize video conferencing. As the richest communication medium currently available, would these dynamics look different in an organization that does readily employ such technology? I would surmise that, similar to face-to-face contact, the use of video would render other presence bridging tactics less important. That said, informants noted that, while video conferencing surely conveys social cues more so than phone calls or emails, "*the lighting is always wrong; their mannerisms don't come through in two dimensions like they do in three dimensions…Oh dude it doesn't translate well in effectively communicating. I almost feel like it hampers it*" (EH28). This suggests that video conferencing does not render other presence bridging activities unnecessary, and while specific tactics may become less important for building intimacy once a richer communication medium is regularly introduced into the relationship, they are likely still important for conveying additional social cues.

Lastly, I noted that my context was situated in the IT industry, an area known for its male dominance (more than a 7:3 ratio of men to women at the time of study, Bureau of Labor Statistics, 2016). We know that relational dynamics often differ between the genders. For example, women tend to talk with friends – and talk about more intimate and personal issues – while men tend to engage in activities with friends (Fehr, 1999). Women are also more likely than men to form more personal and intimate relationships online (McKenna et al., 2002; Parks, 1996). As a result, my context provided somewhat

of a robustness check for the emerging dynamics. The very fact that I found strong friendships and clear indicators of distinct virtual coworker friendship facilitators and tensions in such a male-dominated organization suggests that these might be even more apparent and readily observable in a more gender-balanced context.

The transferability issues discussed should be considered in conjunction with the strengths of the study, such as its rich data collection, longitudinal design, and, as I will discuss next, the potential for future research ideas emanating from this dissertation.

Future Research Directions

Although I have submitted many directions for future research throughout this discussion section, such as teasing out the differential impact of virtuality on relational processes, and encouraging scholars to consider the potentially imagined worlds that virtual employees may conjure, there are also many other ways in which scholars can build on this work.

An important next step for future research is to determine which virtual coworker friendship facilitators are most important and when. For example, under conditions of high levels of virtuality, are presence bridgers more important to friendship formation than relational informalizers? Further, I suggested that all three sets of facilitators were necessary for friendship formation, but each was not sufficient on its own to facilitate the development of a friendship between virtual coworkers. But what about the activities within each of the facilitators? Are they interchangeable? While it is largely a question for future empirical work to address, it is likely that, to the extent that activities within each facilitator set differ in the social presence information they convey about a potential friendship partner, they are not noninterchangeable. Indeed, I previously established that

both virtual social intelligence and media proficiency were necessary for relational digital fluency. When it comes to the two relational informalizers, the same holds true – personalization and sharing emotion serve distinct purposes. While personalization infuses a coworker relationship with non-work related content about the individuals, sharing emotion expands the affective boundaries of the relationship. Because friendship is a personalized, affectively-laden relationship, both activities are necessary. However, the activities that comprise presence bridgers are a slightly different story. While each has the propensity to convey different types of information at any given time, their substitutability is likely content and context dependent. For example, learning what someone looks like through Facebook (an alternative information source) may replace imagination in terms of an individual's physical appearance, but imagination may still aid in understanding a potential friendship partner's facial expressions.

Additionally, research has posed a strong reciprocal feedback loop between sender and receiver that confirms each other in virtual interactions (Walther, 1996). There is also evidence to suggest that one of the most important maintenance strategies, particularly in terms of managing tensions, is agreement between relational partners about how to manage the relationship (Sias et al., 2012). Because coworker friendships are dyadic relationships, several important questions still remain about how these dynamics are negotiated between friendship partners. For example, what happens when facilitators are/are not reciprocated (e.g., one individual requests Facebook friendship and it goes unaccepted)? Are certain facilitators more important for reciprocation? How do virtual coworker friends manage these tensions together? Are shocks felt equally by both friendship partners? If not, what are the implications? Such questions also highlight the

need to build on the findings of this dissertation. Indeed, I largely painted a picture of forward-progressing virtual coworker friendship formation. When might the development of these relationships stagnate or even regress? As noted, the experience of tension is likely one predictor, and perhaps the lack of reciprocation of facilitators another. Future research might employ a research design in which both individuals are present for interviews, both submit regular journal entries, or dyadic interactions are captured (e.g., transcripts of internal instant messaging conversations or email chains) to better understand these negotiated dynamics.

Further, I surmised during the design stage of my dissertation that both the virtual coworker friendship formation and tension dynamics would unfold quickly. What I did not anticipate, though, was how hard they would be to capture in real-time through semi-regular interviews. Future research might greatly benefit from broadening the methodology employed to study friendships at work to more expediently capture individuals' experiences, particularly with the tensions. Experience sampling methodology (ESM), for example, holds great promise in further teasing out the nuances of how the virtual coworker tensions process unfolds over time and differs from what we know happens in co-located workplace friendships (Csikszentmihalyi & Larson, 1987). Diary studies in which informants keep a real-time log of the friendships they form, the tensions they face, and how they manage these friendships might also be an effective way to surmount these temporal challenges for researchers (Amabile, Barsade, Mueller, & Staw, 2005).

Moreover, other factors that impact virtual coworker friendships emerged as important to consider in future research. The order in which friendships were formed, for

example, was an oft-repeated theme. As mentioned in my literature review, scholars have insinuated that past types of relationships may influence the development of future types of relationships (Ashforth, 2000). My data suggest that there are meaningful differences in the form and function of virtual coworker friendships when the employees have a pre-existing friendship and then become coworkers. Informants described upside in terms of the tensility (i.e., extent to which the relationship can withstand stressors) and potential longevity of the friendship relationship:

> *[Because we were friends first], the friendship supersedes the job versus the job supersedes the friendship… But if you didn't become friends until after you had the job then you're probably not going to remain friends with them unless it's convenient. Because usually it's more of a working relationship than merely a friendship in a lot of ways, I think.* (NH15_3)

But they also described these very same situations as a source of tension:

> *The parts which have been very uncomfortable [are] when I've had a friend outside out of Cloudly and I've hired them into Cloudly. That has been awkward. Because they have a certain expectation when they weren't working in our organization and that expectation gets reset when they enter the organization. And that makes for awkwardness on both their side and my side. And then it's harder to take any kind of disciplinary action. I hired a friend of mine who I thought would be a good fit here – turned out to be a complete mistake. And it was tough to deal with the ramifications of eventually having to fire the person after that.* (EH24)

Given that organizations often have strong referral policies incentivizing their employees to recommend friends for open positions throughout the organization, teasing out when and why overlaying a coworker relationship onto a friendship functions differently than when a friendship is developed through a coworker relationship is important for future research to better equip individuals to seamlessly blend these relationships.

Finally, organizations and their members do not exist in a vacuum; outside forces, like the economy (in-person meetings can be quite costly for virtual organizations), an

employee's personal life (how willing they are to travel and spend extra time for socializing), and even something as seemingly banal as the weather might make a difference to friendship formation, especially when working virtually and needing to drive long distances to connect with potential friendship partners: "*I think in winter people like to be outside a bit less doing things. Yeah I'll just say I expect something like that [to form friendships at work] might happen in the spring*" (NH22_2). While our research is typically siloed into macro and micro scholarship, considering the extra-organizational forces that impact individuals, dyads, and organizations is a much-needed area of research to better integrate organizational dynamics within the broader context of society.

CHAPTER 6

CONCLUSION

The beginning of this dissertation questioned the impact of virtualization on our workplace friendships, including how individuals experience and manage the tensions they face in these relationships. Through a longitudinal, qualitative study of a large IT company, I identified three sets of facilitators necessary to create virtual coworker friendships. I also established the various ways in which virtuality influences how coworker friendship tensions are provoked, experienced, and managed. From this emergent theory, we have a nascent answer to the questions posed earlier: it is the type of virtual interaction and individuals' relational digital fluency, rather than the mere fact that employees are virtual, that most impacts virtual coworker friendship formation. Additionally, virtuality makes coworker friendship tensions less likely, but experienced differently when provoked. It is my hope that this dissertation helps us better appreciate the importance and dynamics of virtual coworker friendship, and sparks future research that continues to enhance our understanding.

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APPENDIX A

TABLES AND FIGURES

Table 1. Tactics for managing tensions

Tactic	**Description of tactic**	**Paralyzing vs. Functional**
Selection	Choosing either the work role or the friendship role	Paralyzing
Separation/Separate worlds/Splitting	Isolating the work or friendship role	Paralyzing
Integration	Simultaneously fulfilling both the work and friendship roles	Paralyzing
Repression	Reality of conflicting work/friendship roles is removed from consciousness	Paralyzing
Regression	Ignoring current understandings of conflict and drawing on past understandings	Paralyzing
Projection	Transferring an attitude or characteristic about oneself to another	Paralyzing
Reaction formation	Responding to the tension in the opposite way that one would be expected to	Paralyzing
Denial	Consciously ignoring the conflicting roles	Paralyzing
Doing nothing	Recognizing the conflicting roles but not doing anything to manage the conflict	Paralyzing
Acceptance	"Living" and "working" with the tensions	Functional
Confrontation/Negotiated integration	Identifying the tension and socially constructing a different way to approach the situation	Functional
Transcendence	Reframing the tensions to think in terms of them	Functional

Table 2. Virtual coworker friendship facilitators

Facilitator	Definition	Activity	Illustrative quotes
Presence bridgers	Activities aimed at filling in the "social presence" (i.e., "the feeling one has that other persons are involved in a communication exchange," Walther, 1995: 188) gap between communicating virtually and face-to-face	Imagination	"*And it's funny when you talk to someone you hear a voice, and that does tend to create a picture and then when you meet them it's like – 'Really? You're him?'*" (RT2_1) "*That was one of the things as soon as I realized that there is [a] function that takes individuals' picture IDs—you know pictures from their IDs, and it overlays them with the org chart. I printed that out for my team…I don't want to just conjure up some random image. I want to know—I want to see who I'm talking to*." (NH7_1)
		Revealing identity	"*I reach out [to my virtual coworkers] kind of informally through more of an informal email with a quick bio. 'Hey, here's who I am, here's where I'm located, this is kind of what I do.'*" (NH18_3) "*A lot of people don't put their personality in emails. And a lot of people don't put their personality in chat. A lot of remote support people I talk to, they were just basically like a robot almost*." (EH10)

		Learning through alternative information sources	*"When you find the email and they don't have a picture on there, you have to like go through the portal to find them."* (EH32) "*One habit I've picked up over the past few years is – whenever I'm dealing with someone, especially in a large company like this of 70,000 people – it's not uncommon to work with someone I've never dealt with before. I go through the org chart and pull out that person's picture. It helps me when I'm talking to them to be looking at a picture. It gives me insight for whatever reason*." (EH18)
		Occasional face-to-face interaction	"*So I think whatever remote relationships you make, with the exception of maybe seeing them at a company sponsored event or conference from time to time, they're gonna stay remote. And you're gonna interact with that individual when you think that they can contribute to maybe a question you have or something of that sort. There isn't going to be a whole lot of friendly, uh, personal discussions. You know what I mean? Those types of things happen face-to-face over a beer or whatever*." (NH3_2) *"I would say any together-in-the-room sort of thing. After that, the virtual*

			relationship actually all works out. I consider many of my teammates—people that I've worked with remote over the years—friends, and I'm still in touch with some of them who have gone on to other companies, even though they're on the other side of the country. You totally get real friendship and teamwork out of it. I'm just saying there's an ice-breaker-y kind of thing that has to happen—you have to meet in person before it can ever really gel. There's no magic, just have a phone call and now we're buddies. For whatever reason, it just doesn't work." (EH31)
Virtual relational informalizers	Activities aimed at building a relationship that goes beyond a task-focused coworker relationship (cf. Sias et al., 2011)	Personalization	"*Yeah, there's a couple of guys on the team that like I said they were more willing to go to lunch… So I emailed them separately and said 'hey, I'm coming to town, would you like to do lunch with me?' And then the one said 'yes' and said, 'I invited so and so,' his best buddy and I said, 'yeah, I'd like that.' And so then that gave me two guys that I could start branching off with.*" (NH12_3) "*So we talk pretty regularly on the phone. He travels a lot more than I do because his territory is much more geographically disbursed. So when he is traveling sometimes he will make time*

			to spend some time here with me." (NH21_1)
		Sharing emotion	"*I do have a couple of friends here, actually one of them has become a lot closer…I let my emotions [out] with him because I trust him. And he does the same*." (RT12_3) "*We got a puppy back before Thanksgiving and very long story; short five weeks later the puppy's dead...Talking to [Richard], in particular, on that you kind of—you let some pretty significant walls come down…I think at the end of the day you have these professional relationships that are also friendships and sharing that kind of tragedy, if you will, it brings a more humanness into that. The fact that we all on a daily basis are dealing with some kind of trial or hardship or whatever it gives you a little bit more insight into who that person is. When you have that friendship level, you can be a little bit more real with 'hey, this really hurt and here's how it hurt*.'" (NH18_3)
Relational digital fluency	An individual's proficiency and comfort in utilizing virtual communication media to build and maintain	Virtual social intelligence	"*It comes down to your sixth sense. Every step of the way when you're communicating – when I'm communicating with someone in a virtual environment where there's no media presence, I focus a*

	personalized coworker relationships (cf. Briggs & Makice, 2012; Colbert, Yee, & George, 2016)		*lot on the verbal communication.*" (RT12_3) *"I would say since when I first came to Cloudly, the virtual relationships – it'd be more transactional. Why would you IM me after? But I think I'm more comfortable now, when I get a new assignment for someone in India… I realize that you have to kind of create a little friendship, be personable, because – I think that's benefitted me so much*." (EH14)
		Media proficiency	"*…there's so many tools out there and ways to get in contact with people and meet quickly if you will from a virtual standpoint. Just understanding what those tools are and leveraging them makes it very – I don't want to say very easy, but it's definitely something I'm very comfortable with*." (NH18_1) "*I think everybody has their own way…to try to get a hold of you. There's certain people that they prefer text. There are certain people that prefer IM…My big guy that run the sales efforts for my division, he is somebody that you usually can't call him on the phone but I can if I need something. I'll text him. Yeah, he'll respond to email like nobody's business. But*

			he won't pick up a phone." (RT9_2)

Table 3. A comparison of coworker friendship tensions in a co-located vs. virtual workplace

Phase of tension process	Co-located workplace	Virtual workplace
Shock to the coworker friendship	-More likely to be provoked by the social context, including others' coworker friendship tensions (i.e., contagion)	-More likely to be provoked by a miscommunication -Lack of regular interaction may prompt imagined scenarios (e.g., favoritism by boss when not true)
Salient tension	-Awkwardness can be seen/felt by others -Continued in-person interaction heightens experience of salient tension	-Greater opportunity to fester until next interaction
Reactive response	-More likely to effectively diffuse tensions outside of the work context (e.g., over a beer or at lunch)	-Harder to diffuse via CMC; more effortful and more opportunity for misunderstanding -Easier to create psychological distance from one another - Non-response becomes a plausible option
Proactive management	-More likely learned based on others' experiences	-Facilitated by the virtual context itself (i.e., less likely to experience shocks)

Figure 1. The virtual coworker friendship formation process

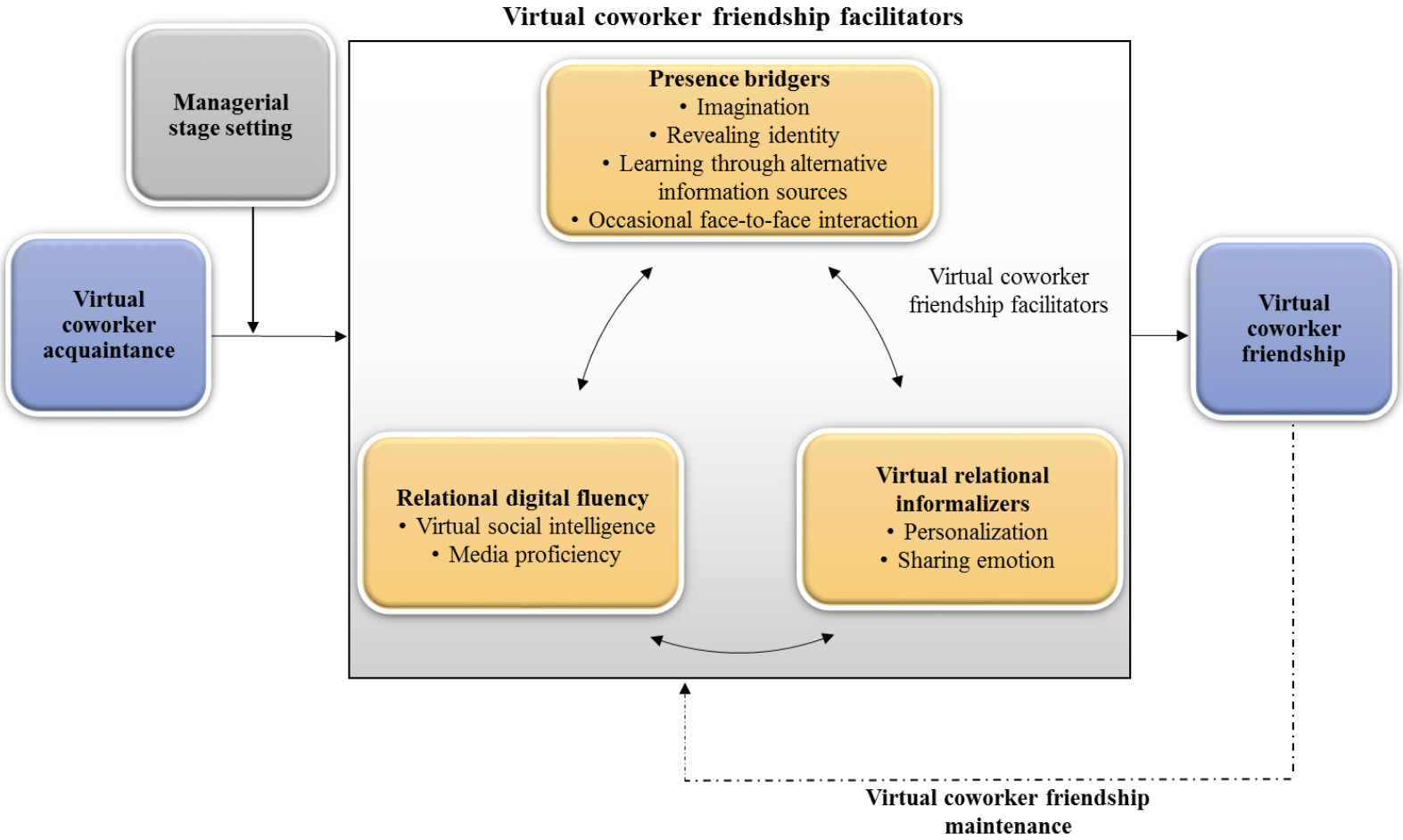


Figure 2. A model of the basic virtual coworker tension process

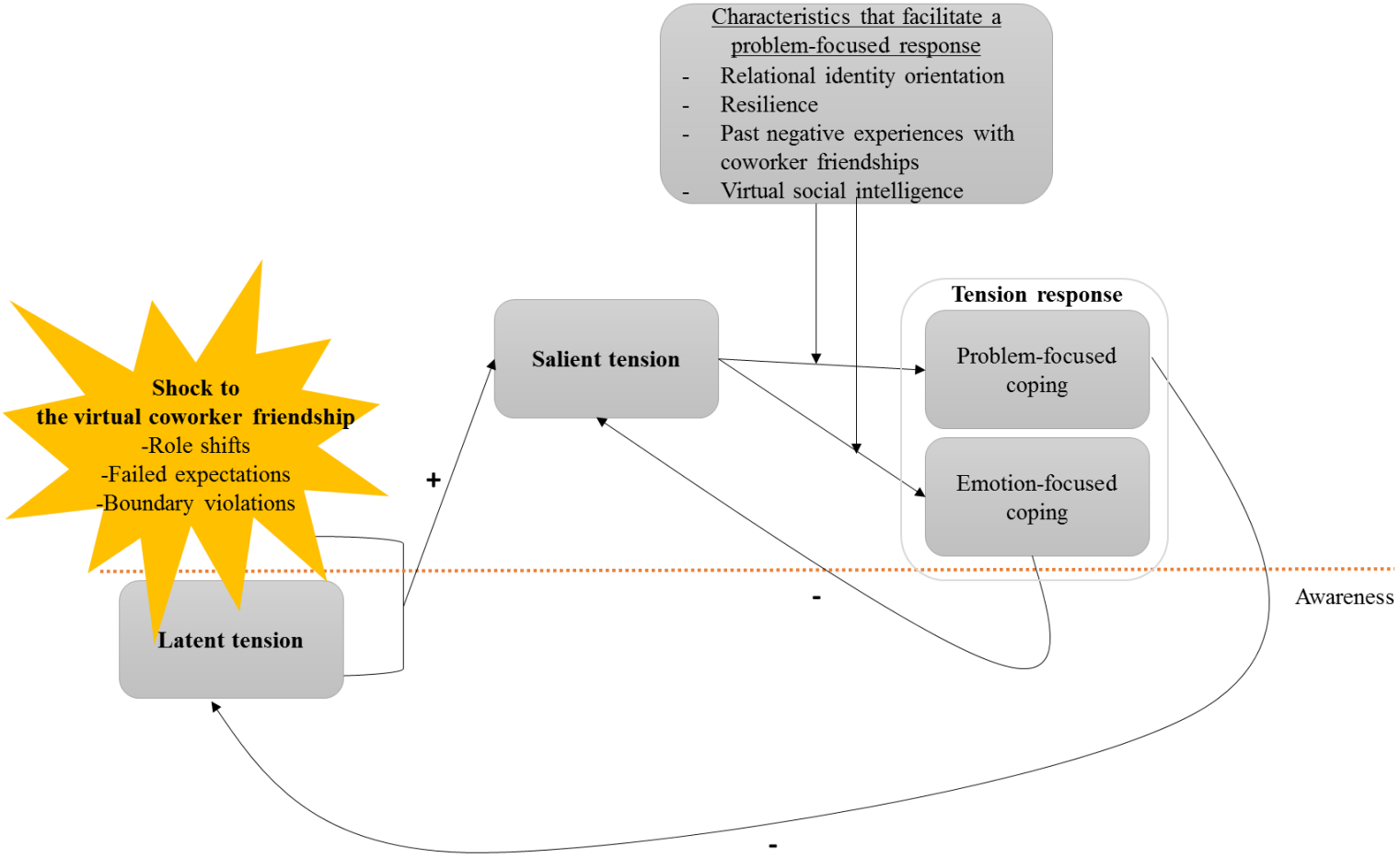
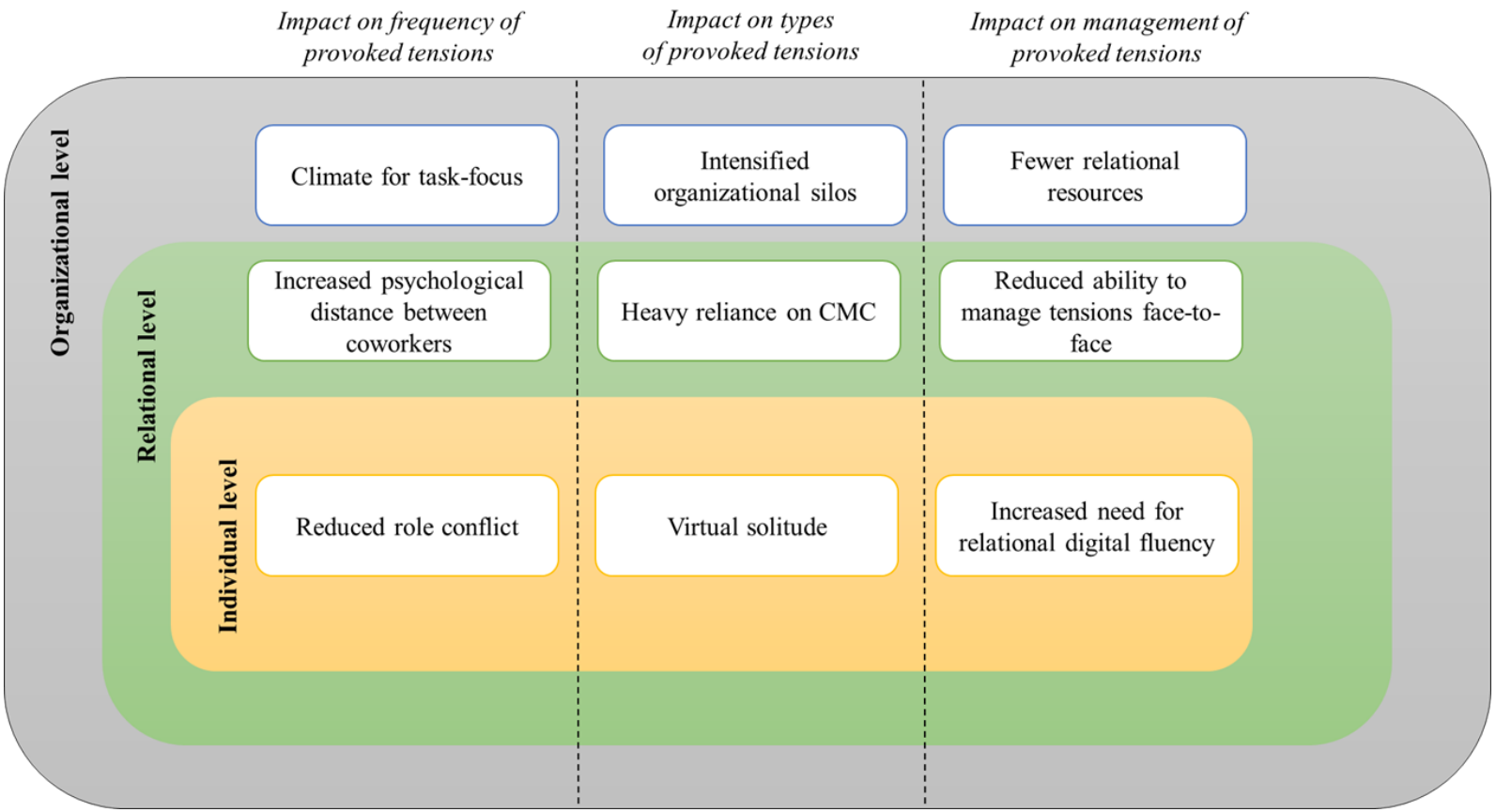


Figure 3. The impact of virtuality on virtual coworker friendship tensions



APPENDIX B

OVERVIEW OF MAJOR THEORETICAL APPROACHES TO TENSIONS

The dialectic perspective has been influential in how communication scholars examine contradiction in relationships, including workplace friendships (Baxter, 1990; Bridge & Baxter, 1992; Hinde, 1997). A dialectical view takes a processual stance on tension and contends that competing tensions can be resolved through integration. Over time, the combination of these tensions will eventually create a new entity, which will ultimately be met by a new antithesis such that the tension is ongoing, yet evolving (Smith & Lewis, 2011). Dialectics stem back to philosopher Hegel (1968) and involve at least three basic concepts: self-contradiction, interconnection, and change. Dialectic scholars look at contradiction as the basis for explaining a phenomenon, emphasizing the interrelatedness of everything – that entities can be both mutually exclusive and interdependent simultaneously (Lawler, 1975), and see change as a constant (Ford & Ford, 1994; Rawlins, 1983).

Scholars of tension have also looked at dualities, or "the simultaneous presence of competing and ostensibly contradictory qualities" (Ashforth & Reingen, 2014: 475) and paradox, defined earlier as "contradictory yet interrelated elements that exist simultaneously and persist over time" (Smith & Lewis, 2011: 382). Ashforth and Reingen (2014) outlined five characteristics of dualities, observing that: (1) the contradictory elements are simultaneously present; (2) the contradictory elements are relational and interdependent; (3) both elements that comprise the duality are necessary for organizational health; (4) the duality is typified by tension; and (5) the ongoing tension is dynamic. In studying the tension between being friends and competitors, Zou and Ingram (2013) took a duality approach, finding that those who see competition with their friends at work have higher job performance, but are more likely to leave.

Scholars of paradoxical tensions, or "cognitively or socially constructed polarities that mask the simultaneity of conflicting truths" (Lewis, 2000: 761), note that tensions may take different forms such as when the conflicting elements are embedded in a concept, in a verbal or non-verbal behavior (e.g., Zhang et al., 2014), or when they, over time, become institutionalized in a system, as in an organization or relationship (Putnam, 1986). Smith and Lewis's (2011) review of the literature catalogued the primary organizational paradoxes as learning tensions (conflict between building on and destroying the past to create the future), organizing tensions (conflict between collaboration and competition), performing tensions (conflict between multiple and competing goals), and belonging tensions (conflict between defining oneself as an individual or in terms of collective values, roles, and memberships). Paradoxical tensions remain dormant or latent until they are made salient (the contradictory tensions are invoked; cf. Ashforth & Johnson, 2001) by the context or by the individual's own cognitive efforts (Ashforth & Reingen, 2014; Smith & Lewis, 2011). In this way, they differ from long-lasting and chronically salient intractable conflicts (Fiol, Pratt, & O'Connor, 2009). Scholars who study paradox believe that there is inherent potential in exploring and embracing the contradiction itself, rather than seeking ways to successfully mute the tensions arising from the conflicting elements. This is because there is essentially no resolution to a paradox; all possible solutions are opposing and intertwined (Lüscher & Lewis, 2008).

Scholars who study stress have emphasized similar tactics for managing stress as those who study tensions. Most relevant, Lazarus and Folkman (1984) distinguished

problem-focused coping, or altering the environment to eliminate the source of tension, from emotion-focused coping, or regulating emotions after a stressful situation has been appraised. In the former, individuals are proactively managing the situation to avoid the potential experience of negative emotions, while in the latter, the tensions have been provoked, and individuals must therefore address the felt emotions.

APPENDIX C

FINAL INTERVIEW PROTOCOL FOR ROLE TRANSITIONS

Background information

1. How have the past few months gone in your role?

2. When you reflect back on your transition, how have relationships impacted it? Friendships in particular?

Context in general

3. Tell me a little about what Cloudly has done help you meet and get to know your new coworkers. Keep in touch with your old ones?
    a. What do you do personally to get to know others? [events, outside of work stuff]
    b. What does your manager do?
    c. How about your office? [Probe: versus other offices]
    d. How is this similar to/different from your past role [probe for co-located/virtual roles]?

4. What role does social media play in your relationships at work?
    a. Do you connect with your coworkers on social media? (e.g., Facebook "friend")
    b. How do you decide who to connect to?
    c. Do you use social media differently for virtual coworkers?

Previous relationships

5. Are you keeping in touch with people from your previous role? Describe how.

6. How have these people helped you transition into your new role? Have they made the transition harder at all?

Current relationships – moving from past relationships to current ones…

7. How would you describe your relationships with your coworkers in your new role? Your manager?
    a. Is this different from your previous role?
8. How often do you interact with your coworkers? What about? [Probe for task vs. social] What are the various ways you interact? [Probe for phone, email, etc., especially those forms they don't mention] How much is face-to-face?
    a. Do you interact in a group? Or is it more one-on-one? [How? Group chats, lunches, etc.]

9. Do you interact outside of work at all? If so, what does that look like?

Presence bridging tactics

10. How do you interact with virtual coworkers?
    a. How do you get to know them?
    b. Are there things in particular you do to make it feel more like you're talking to them in person?
11. How, if at all, does the relationship change if you've met them? Skyped with them?

Informalization tactics

12. How would you describe how you move from a strictly coworker relationship to a coworker friendship?
13. Are there things in particular you do to make the relationship feel friendlier?
14. How can you tell if someone is friendship material through virtual communications?
    a. Social media
        i. Have you connected with anyone on social media since we last spoke?
        ii. How did you decide who to connect with?
        iii. How, if at all, has that changed the relationship?
15. How do emotions play a role in your relationships at work?
16. Are there certain signals that you pick up on when someone is willing to be more friendly? Signals that you send?

Relational digital fluency

17. How can you tell if someone is willing to be friendly over virtual communications?
    a. What do you do to signal to others?
    b. Are there different media that work better than others? How do you decide?
18. How, if at all, does your or others' comfort-level with technology influence relationship development?
19. How, if at all, has having virtual coworkers in the past influenced how you form relationships now?
20. Can you tell me a story of when communicating with a virtual coworker was easy? Hard?

21. How are the friendships you have with coworkers from your current role different from coworker friends you've made in this new role?

22. How does being friends first and coworkers second versus the other way around change anything?

23. Can you think of one friend you've met in your new role and tell me the story of your friendship:
    a. Have you met in person yet?
        a. [No] Do you expect to meet in person? If yes, how do you think that would change the relationship?
        b. [Yes] What is it like to be friends and coworkers with someone you haven't met?
    b. More probes for story:
        a. How did the coworker friendship form?
            1. How have others played a part in this formation?

b. How has it evolved over time?
    1. How have others played a part in how the friendship has evolved?
c. Is this friendship part of a group of friends? Are others close in the same way?
    1. Can you give me an example of when something happened in your friendship and it affected or was affected by others?
d. Has it ever been complicated or hard to be friends with this person?

c. How does this friendship differ from non-virtual friendships?
d. How is this relationship different from other friendships inside of work? Outside of work?
e. What do you expect the friendship to look like in the future?

24. Do you look at friendship differently in your current role than in your past role?

25. How does working virtually impact your friendships? How do you become friends with virtual coworkers?

26. How do friends help you at work? Are they ever a bad thing? Is this different for virtual friends?

27. What do you look for in virtual friends? Is it different from non-virtual friends?
    a. How do you get to know these friends?

Friendship tensions – I'm interested in how being friends with coworkers can help and maybe not help you at work.

28. As you've transitioned to your new role, have you had a situation when you felt torn between being friends and being coworkers at the same time? [How long have you been friends?] If they don't understand the question – ask if there was ever a time when it was weird to be both friends and coworkers. [If they don't have a situation in the new role, ask more generally.]
    a. Why did you feel torn?
    b. How did you manage the feelings of being torn? What helped you manage them? What made it harder to manage them?
    c. What was the outcome of the situation?
    d. Do you think your friend experienced the situation in the same way?
    e. How did it impact your friendship? Your coworker relationship?
    f. How did other people influence the situation?
    g. Were other people affected by this situation?

29. Have you ever had a friendship at work end?
    a. How did that come about?
    b. What was the outcome?
    c. Was this different for a virtual vs a non-virtual friend?

Managing friendship

30. Generally speaking, how do you manage your friendships at work? Can you give me an example? What obstacles are there to managing friendships with coworkers?

31. How do the ways in which you manage your friendships at work change over time, or given the situation at hand?

Is there anything we haven't touched on that you think would be important for me to know about your friendships at work?

APPENDIX D

FINAL INTERVIEW PROTOCOL FOR NEW HIRES

Background information

32. How would you describe your relationships with your coworkers now? Your manager?
    a. What does interaction with your coworkers look like? Email? Phone? How much is face-to-face?
    b. Do you interact in a group at all? What does that look like?
    c. Do you interact outside of work at all? If so, what does that look like?

Context in general

33. How has Cloudly made it easier to form and maintain virtual friends? Harder?

34. How does working virtually with coworkers affect how you do your work? Affect your relationships?

Presence bridging tactics

35. How do you interact with virtual coworkers?
    c. How do you get to know them?
    d. Are there things in particular you do to make it feel more like you're talking to them in person?
36. How, if at all, does the relationship change if you've met them? Skyped with them?

Informalization tactics

37. How would you describe how you move from a strictly coworker relationship to a coworker friendship?
38. Are there things in particular you do to make the relationship feel friendlier?
39. How can you tell if someone is friendship material through virtual communications?
    b. Social media
        i. Have you connected with anyone on social media since we last spoke?
        ii. How did you decide who to connect with?
        iii. How, if at all, has that changed the relationship?
40. How do emotions play a role in your relationships at work?
41. Are there certain signals that you pick up on when someone is willing to be more friendly? Signals that you send?

Relational digital fluency

42. How can you tell if someone is willing to be friendly over virtual communications?
    c. What do you do to signal to others?
    d. Are there different media that work better than others? How do you decide?
43. How, if at all, does your or others' comfort-level with technology influence relationship development?

44. How, if at all, has having virtual coworkers in the past influenced how you form relationships now?
45. Can you tell me a story of when communicating with a virtual coworker was easy? Hard?

Follow-up on virtual coworker friendship

46. The last time we talked, you mentioned XXXX as a friend. How has that relationship unfolded?
    a. Have you met in person yet?
        a. [No] Do you expect to meet in person? If yes, how do you think that would change the relationship?
        b. [Yes] What is it like to be friends and coworkers with someone you haven't met?
    b. More probes for story:
        a. How did the coworker friendship form?
            1. How have others played a part in this formation?
        b. How has it evolved over time?
            1. How have others played a part in how the friendship has evolved?
            2. How has working virtually influenced the friendship?
        c. Is this friendship part of a group of friends? Are others close in the same way?
            1. Can you give me an example of when something happened in your friendship and it affected or was affected by others?
            2. Has it ever been complicated or hard to be friends with this person?
    c. How does this friendship differ from non-virtual friendships?
    d. How is this relationship different from other friendships inside of work? Outside of work?

47. How, if at all, does this friendship help you do your work? Is it ever not helpful?

48. [If they talk about a friend who they knew before] How are the friendships you have with coworkers from before Cloudly different from coworker friends you've made at Cloudly? How does being friends first and coworkers second versus the other way around change anything?

Friendship tensions

49. Have you ever felt torn between being friendly and coworkers with someone?
    a. Why did you feel torn?
    b. How did you manage the feelings of being torn? What helped you manage them? What made it harder to manage them?
    c. What was the outcome of the situation?
    d. Do you think your friend experienced the situation in the same way?
    e. How did it impact your friendship? Your coworker relationship?

    f. How did other people influence the situation?
    g. Were other people affected by this situation?
50. When does working virtually make making/managing friends easier? Harder? Why?
    d. Are there situations in which you might have experienced tension but didn't? If so, how did you avoid the tension?
51. Have you ever had a friendship at work end?
    a. How did that come about?
    b. Was there anyone who you expected to be friends with who you wound up not becoming friends with?
    c. What was the outcome?
    d. Was this different for a virtual vs a non-virtual friend?
52. Is there anything we haven't touched on that you think would be important for me to know about your friendships at work?

APPENDIX E

FINAL INTERVIEW PROTOCOL FOR EXPERIENCED HIRES

Background information

1. Tell me about your role: what do you do? How long have you been at Cloudly? What percentage of the time would you say you work virtually?

2. How would you describe your relationships with your coworkers? Your manager?

3. How often do you interact with your coworkers? What about? [Probe for task vs. social] What are the various ways you interact? [Probe for phone, email, etc., especially those forms they don't mention] How much is face-to-face?

    a. Do you interact in a group? Or is it more one-on-one? [How? Group chats, lunches, etc.]

4. Do you interact outside of work at all? If so, what does that look like?

Context in general

5. Tell me a little about what Cloudly does to help you meet and get to know your coworkers.
    a. What do you do personally to get to know others? [events, outside of work stuff]
    b. What does your manager do?
    c. How about your office? [Probe: versus other offices]
    d. How is this similar to/different from other companies you've worked for [probe for co-located/virtual companies]

6. What role does social media play in your relationships at work?
    a. Do you connect with your coworkers on social media? (e.g., Facebook "friend")
    b. How do you decide who to connect to?
    c. Do you use social media differently for virtual coworkers?

7. How would you describe how Cloudly expects you to interact with the people you work with? Do you generally see people becoming friends?

Friendship in general

8. Would you say you have friends at work? Do you have coworker friends who are virtual?

9. Do you ever feel like you should or shouldn't be friends with coworkers? Why?

10. When I say "coworker friendship," what does that mean to you? How would you define it? Has this definition changed over time? Is this definition of friendship different for the virtual friends you have vs. non-virtual friends?

11. How does working virtually impact your friendships? How do you become friends with virtual coworkers?

12. How do friends help you at work? Are they ever a bad thing? Is this different for virtual friends?

13. What do you look for in virtual friends? Is it different from non-virtual friends?
    a. How do you get to know these friends?

14. Can you think of one virtual friend you have and tell me the story of your friendship:
    a. Have you met in person yet?
        a. [No] Do you expect to meet in person? If yes, how do you think that would change the relationship?
        b. [Yes] What is it like to be friends and coworkers with someone you haven't met?
    b. More probes for story:
        c. How did the coworker friendship form?
            1. How have others played a part in this formation?
        d. How has it evolved over time?
            1. How have others played a part in how the friendship has evolved?
        e. Is this friendship part of a group of friends? Are others close in the same way?
            1. Can you give me an example of when something happened in your friendship and it affected or was affected by others?
        f. Has it ever been complicated or hard to be friends with this person?
    c. How does this friendship differ from non-virtual friendships?
    d. How is this relationship different from other friendships inside of work? Outside of work?

15. What do you expect the friendship to look like in the future?

16. [If they talk about a friend who they knew before] How are the friendships you have with coworkers from before Cloudly different from coworker friends you've made at Cloudly? How does being friends first and coworkers second versus the other way around change anything?

17. Are there other coworkers or managers that you would also consider to be friends? [Probe for number and role-relationships]
    a. [Return to questions above under #14]

18. Do you feel like you have a coworker or manager that you consider more of an acquaintance at this point? How does such a relationship differ from a friendship?

Friendship tensions – I'm interested in how being friends with coworkers can help and maybe not help you at work.

19. Can you describe a situation when you felt torn between being friends and being coworkers at the same time? [How long have you been friends?] If they don't understand the question – ask if there was ever a time when it was weird to be both friends and coworkers.
    a. Why did you feel torn?
    b. How did you manage the feelings of being torn? What helped you manage them? What made it harder to manage them?
    c. What was the outcome of the situation?
    d. Do you think your friend experienced the situation in the same way?
    e. How did it impact your friendship? Your coworker relationship?
    f. How did other people influence the situation?
    g. Were other people affected by this situation?

20. Have you ever had a friendship at work end?
    a. How did that come about?
    b. What was the outcome?
    c. Was this different for a virtual vs a non-virtual friend?

Managing friendship

21. Generally speaking, how do you manage your friendships at work? Can you give me an example? What obstacles are there to managing friendships with coworkers?

22. How do the ways in which you manage your friendships at work change over time, or given the situation at hand?

Is there anything we haven't touched on that you think would be important for me to know about your friendships at work?

Is there anything coming up in your life that may affect your relationships at work?

APPENDIX F

PROOF OF IRB APPROVAL

ASU Knowledge Enterprise Development

EXEMPTION GRANTED

Blake Ashforth
Management
480/965-0917
blake.ashforth@asu.edu

Dear Blake Ashforth:

On 8/3/2015 the ASU IRB reviewed the following protocol:

Type of Review:	Initial Study
Title:	Can we be coworkers and friends? An inductive study of the experience and management of workplace friendship tensions
Investigator:	Blake Ashforth
IRB ID:	STUDY00002898
Funding:	None
Grant Title:	None
Grant ID:	None
Documents Reviewed:	• Revised interview protocols for new hires (round 1) and tenured employees, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); • Revised IRB form , Category: IRB Protocol; • Revised informed consent for new hires, Category: Consent Form; • Confirmation of voluntary participation (per IRB request), Category: Recruitment Materials; • Participant recruitment email from VP.pdf, Category: Recruitment Materials; • Informed consent for tenured employees, Category: Consent Form; • Approval letter for data collection from participating company, Category: Off-site authorizations (school permission, other IRB approvals, Tribal permission etc); • Revised interview protocols for new hires (rounds 2-