Thanks for Stopping By!

An Examination of the Costs and Benefits of Workplace Intrusions

by

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ABSTRACT

Workplace intrusions—unexpected encounters initiated by another person that disrupt an individual's work—are generally characterized as negative experiences that deplete resources, increase role and information overload, and promote strain. My research challenges this consensus by arguing that intrusions may also provide benefits to the employees who are intruded upon. Specifically, I investigate how intrusions impact the extent to which employees engage in their own work—engagement—and the extent to which they engage with others at work—collaboration. I also investigate the indirect effects of different types of intrusions on employees' task-focused and person-focused citizenship through these mechanisms. I tested my predictions utilizing experience sampling methodology (Study 1), a within-person experimental critical incident study (Study 2), and an experiment (Study 3). My research investigates the dynamics of various types of workplace intrusions, with results suggesting that intrusions may lead to beneficial employee outcomes in addition to the adverse outcomes previously demonstrated in the literature. Given the ubiquitous nature of intrusions in organizations, these findings have both theoretical and practical significance.

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CHAPTER 1

INTRODUCTION

Interruptions are a fact of modern organizational life. From emails to phone calls to visits from colleagues, interruptions—incidents or occurrences that impede or delay organizational members as they attempt to make progress on their work tasks (Jett & George, 2003)—can consume a substantial portion of an employee's day. Indeed, scholars have suggested that interruptions often consume multiple hours of the day, resulting in countless stoppages of work and transitions between tasks (Berger & Merritt, 1998; Brown, 2014; González & Mark, 2004; Grove, 1985; Mintzberg, 1990; Spira, 2011). These stoppages and transitions initiated by interruptions have important implications for employees. For instance, they may consume valuable time needed to complete task work, creating additional and often unnecessary job demands (Berger & Merritt, 1998; Grove, 1985; Mintzberg, 1990; Perlow, 1999). In addition, interruptions often cause people to halt progress and attention toward the task at hand, making it difficult to reach full engagement or "flow" during the workday (Cellier & Eyrolle, 1992; Jett & George, 2003; Kirmeyer, 1988; Parke, Weinhardt, Brodsky, Tangirala, & DeVoe, 2018). In sum, perspectives on workplace interruptions suggest that they are highly prevalent and typically detrimental.

Interruptions may take a few different forms. One common type of interruption is a "distraction," which is described as a psychological reaction to external stimuli that interrupts concentration on a task (Jett & George, 2003). Though it is possible that internally derived thoughts may "distract" attention, distractions in the work environment are typically viewed as occurring due to external events or situations that do not involve

direct correspondence with another person. Another common type of interruption is a "break," which is defined as a planned or spontaneous recess from a work task that halts task continuity (Jett & George, 2003). Breaks are unique in that they are self-initiated, which stands in contrast to other types of interruptions. One final type of interruption is an *intrusion*—an unexpected encounter initiated by another person that interrupts an individual's work, bringing it to a temporary halt (Jett & George, 2003). Intrusions are distinguished from both breaks and distractions in that (1) they are initiated outside the self and (2) they are initiated by other people.

Scholars have theorized that intrusions cause many negative consequences, including feelings of anxiety and stress, insufficient time to complete assigned tasks, and reduced engagement (Jett & George, 2003). Empirical research similarly portrays intrusions in a negative light. For instance, scholars have shown that intrusions may consume vital resources, leading to increased levels of depletion (Freeman & Muraven, 2010). Other work has shown that, in addition to depletion, the resource drain that follows from workplace intrusions also promotes strain (Lin, Kain, & Fritz, 2013). Intrusions may further cause a "time famine" in which workers experience increased feelings of time pressure and workload (Perlow, 1999). Moreover, intrusions may increase perceptions of both role and information overload (Kirmeyer, 1988; Speier, Valacich, & Vessey, 1999). Further reflecting this perspective, the popular press has dubbed the office an "interruption factory" (Fried, 2010), with intruders playing the role of "time bandits" (Brown, 2014). In sum, empirical work and the popular press largely suggest that intrusions are inherently negative experiences that workers should attempt to avoid.

That said, it is also possible that intrusions may have some positive consequences. For instance, intrusions may provide the intruding party an opportunity to gather real-time information that would otherwise not be readily available (Kotter, 1982). Intrusions may also aid the individual receiving the intrusion by providing information that helps with the accomplishment of current task work (Kotter, 1982; Sutton & Kelley, 1997). Moreover, intrusions may provide a platform for additional conversations to emerge that may benefit either or both parties (Jett & George, 2003). Intrusions may also have positive relational consequences (Jett & George, 2003), potentially improving the quality of exchange relationships at work or aiding in the development of workplace friendships. Finally, depending on their content, intrusions may provide a mental pause from a task that recharges an employee's energy. In sum, a more comprehensive examination may reveal that the construct of intrusions is more nuanced—and less detrimental—than previously considered.

A key distinction that scholars have yet to account for involves the differences that exist between intrusions. A review of the literature suggests that intrusions may broadly fall under one of two categories. The first category encompasses all intrusions that are not work-related, which includes intrusions that are best characterized as small talk, personal conversations, or personal visits. I refer to these types of intrusions as *non-role intrusions*. The second category encompasses all work-related intrusions, which includes intrusions that assign new work, request an update on current tasks, or gather other relevant information about current task work. I refer to these types of intrusions as *in-role intrusions*. This distinction is important, as I expect that employees' reactions to intrusions will depend in part on whether intrusions are non-role or in-role. Moreover,

this distinction may shed light on discrepancies in the literature surrounding the negative or beneficial aspects of intrusions.

To date, research has primarily considered how intrusions may diminish employee attention and engagement, thus adversely affecting individual performance. For instance, scholars have shown that as employees experience demands which draw their focus away from work, performance may suffer (Speier et al., 1999). I extend this literature by arguing that although some intrusions (e.g., non-role) likely behave as demands that hinder goal achievement—thereby decreasing engagement—other intrusions (e.g., in-role) may behave as demands that provide opportunities for learning and growth—thereby increasing engagement. Consider an instance in which a researcher stops by a colleague's desk to ask about their weekend. In this case, the intrusion is likely to break attentional focus, ultimately making it more difficult to return to their previous task and reducing subsequent engagement. Conversely, consider a researcher who is intruded upon by a colleague with new information regarding a joint research project. In this case, the intrusion might renew the researcher's interest in the project and provide a challenge that injects energy into the researcher's efforts, ultimately promoting subsequent engagement. In sum, I theorize that engagement is a key mechanism that is likely to (1) be differentially affected by different types of intrusions and (2) have an impact on organizationally relevant outcomes.

Another likely outcome of intrusions is the facilitation of collaboration between organization members (Jett & George, 2003). For instance, a conversation that begins with a coworker stopping by a colleague's desk to make small talk may naturally transition into a work-related conversation (Waber, Magnolfi, & Lindsay, 2014) or may

signal to the employee that the coworker is willing and able to work together (Isbister & Nass, 2000). In addition, a colleague stopping by a coworker's desk to ask a task-related question provides an opportunity for that employee to work collaboratively with the coworker on that task (Jett & George, 2003) or to share information or ideas about other tasks (Rousseau, Aubé, & Savoie, 2006). In short, there is reason to believe that both types of intrusions (non-role and in-role) will increase the extent to which an intruded upon party collaborates with others at work.

As such, I also investigate collaboration, which is defined as the extent to which an employee works with colleagues on task assignments (Bedwell, Wildman, DiazGranados, Salazar, Kramer, & Salas, 2012; Harrison, Price, Gavin, & Florey, 2002; Kahn & Mentzer, 1998; Rousseau et al., 2006). Intrusions have a great deal of relevance for workplace collaboration, as intrusions provide an opportunity for information to be transferred and subsequent communication to occur (Jett & George, 2003). Moreover, collaboration facilitates several important work behaviors (e.g., cooperation, coordination, and information exchange) that are likely to have an impact on valued work outcomes (Rousseau et al., 2006), including citizenship behavior. As a result, collaboration represents a unique and important mechanism linking intrusions with individual outcomes.

I also expect that there will be an indirect effect of intrusions on task-focused citizenship through engagement. Specifically, I predict that intrusions, depending on their content, can provide a meaningful challenge for employees, instilling additional energy and motivation to engage in their work. As employees invest additional energy into their work tasks, a likely outcome is increased discretionary behavior (Christian, Garza, &

Slaughter, 2011; Rich et al., 2010). In addition, I expect there will be an indirect effect of intrusions on person-focused citizenship through collaboration. Specifically, I predict that intrusions can facilitate workplace discussions that lead to additional communication and cooperation among coworkers, culminating in increased levels of collaboration. As employees engage in more collaboration, they should have both the opportunity and desire to engage in extra-role behaviors directed toward their coworkers (Liang, Shih, & Chiang, 2015).

In summary, this research builds and tests theory about workplace intrusions that extends beyond the immediate consequences of diverted attention and considers a much broader range of employee consequences. Drawing on Jett and George's (2003) model of general workplace interruptions, I build theory that characterizes intrusions as occurrences that bring benefits in addition to drawbacks. I also outline the unique effects of two distinct types of intrusions on employees' engagement and collaboration. In turn, these two mechanisms should have important implications for employees' task- and person-focused citizenship.

This research makes several theoretical contributions. First, I build upon theory on workplace intrusions (e.g., Jett & George, 2003), shifting the current consensus that intrusions are largely detrimental to the person who is intruded upon. I do so by identifying mechanisms through which intrusions may lead to critical employee outcomes. Importantly, this research does not discount the potential detriments of intrusions that have been identified in the literature. Rather, this research adds to the literature by identifying a more inclusive range of benefits and burdens that follow from workplace intrusions. Second, I build theory on intrusions by identifying two broad types

of intrusions that employees are likely to face on a regular basis—non-role and in-role intrusions—thereby providing a more comprehensive understanding of intrusions. Finally, I contribute to practice by providing novel insights into the burdens and benefits of intrusions. These insights should allow managers and organizations to focus on minimizing the burdens while enhancing the benefits. Given the impact of intrusions on important employee behaviors, these findings should be of interest to organizations and their employees.

CHAPTER 2

LITERATURE REVIEW

In this chapter I provide a review of the interruptions literature, first focusing on (a) the defining characteristics of work interruptions, (b) the frequency of interruptions in work environments, and (c) general perspectives on interruptions. Second, I review the different types of interruptions that individuals may experience at work, focusing on breaks and distractions before examining the unique role of intrusions.

Interruptions

Defining Characteristics of Interruptions. Within the context of organizations, interruptions are best described as "incidents or occurrences that impede or delay organizational members as they attempt to make progress on their work tasks" (Jett & George, 2003, p. 494). Thus, for an act or occurrence to be perceived as a work interruption, an individual must be involved in a work task and experience a break or stoppage in the continuity of that task due to either internal or external forces. Interruptions may best be characterized as an umbrella construct that includes breaks, distractions, and intrusions. Two key defining characteristics of interruptions exist that allow for both the identification and classification of different types of interruptions (Jett & George, 2003). First, interruptions may be initiated either by people or by environmental stimuli, such as a nearby noise. Second, those interruptions that are initiated by people may originate either from yourself (internally) or from another person (externally).

Frequency of Interruptions. Interruptions have become incredibly common in the workplace, and changes in how organizations and employees approach work and

organizing suggest that interruptions may become even more prevalent. That said, estimates for the time and resources interruptions actually consume are varied. Taking a task-focused perspective, estimates for the propensity of interruptions have noted that they may occur as often as every 3 minutes (González & Mark, 2004). From a time perspective, scholars have suggested that intrusions may take up as little as 8 hours per week or as many as 6 hours per day (Berger & Merritt, 1998; Brown, 2014; Grove, 1985; Mintzberg, 1990; Spira, 2011). An investigation by an economic research firm was slightly less convinced of the prevalence of interruptions, finding that they take up about 2 hours of time per work day on average, and result in an estimated loss in productivity in the U.S. alone at just under $600 billion dollars per year (Spira & Feintuch, 2005). Though a consensus has not yet been reached on exactly how much time interruptions consume at work, there appears to be general agreement that they are both frequent and time-consuming.

This is not entirely surprising, as technological advancements and changes to how firms approach organizing have made interruptions a much more common occurrence. For one, changes in information technology have increased the number of access points to employees, making it easier to interrupt others at work (e.g., Cutrell, Czerwinski, & Horvitz, 2000; Czerwinski, Cutrell, & Horvitz, 2000; Speier et al., 1999). Indeed, the institutionalization of smart phone usage has made it possible for workers to be interrupted at seemingly any point in time (Derks, Bakker, Peters, & van Wingerden, 2016; Derks, van Duin, Tims, & Bakker, 2015; Karlson, Meyers, Jacobs, Johns, & Kane, 2009). In addition, shifts to "open office layouts" fueled by the goal of increasing collaboration have made it easier and more likely for interruptions to occur (Oldham,

Kulik, & Stepina, 1991; Perlow, 1999). For instance, open office layouts may provide increased opportunity for unplanned encounters or informal conversations (Chadburn, Smith, & Milan, 2017; Kokkonen & Vaagaasar, 2018; Manca, Grijalvo, Palacios, & Kaulio, 2018). In addition, visual and auditory distractions may increase in open office layouts, resulting in more frequent mental interruptions (Haynes, Suckley, & Nunnington, 2017; Frontczak, Schiavon, Goins, Arens, Zhang, & Wargocki, 2012; Hongisto, 2005). As a result, employees may face any number of interruptions at work that may take a variety of forms, making it increasingly difficult to have extended periods of time to devote attention solely to the task at hand.

      Perspectives on Interruptions. A large pool of research concerning workplace interruptions suggests that they are largely negative experiences that employees should attempt to avoid. For one, they take up valuable time that could be used on specific job tasks, creating additional time pressure, perceived workload, and frustration (Berger & Merritt, 1998; Grove, 1985; Mark, Gudith, & Klocke, 2008; Mintzberg, 1990; Perlow, 1999; Wilkes, Barber, & Rogers, 2018). In addition, interruptions may force people to halt progress on a current task, thwarting immediate progress (Mark, Gonzalez, & Harris, 2005) and making it difficult for individuals to reach full engagement or "flow" once they do return to a task (Cellier & Eyrolle, 1992; Jett & George, 2003; Kirmeyer, 1988; Parke et al., 2018). Interruptions may also lead to or promote procrastination for core job tasks, slowing the performance process and creating additional need to either relearn important details or to direct energies to get back into the flow of work (Jett & George, 2003). In addition, the content of interruptions may suggest to employees the need to pursue multiple goals at once, which may ultimately promote role conflict and ambiguity (Bush,

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2018; Kahn, Wolfe, Quinn, & Snoek, 1964; Rizzo, House, & Lirtzman, 1970). Given the unanticipated nature of interruptions, employees might not adequately plan for them. In failing to fully consider the possibility of being interrupted, employees may set goals that are difficult or unrealistic to meet (Buehler, Griffin, & Ross, 1994), thus leading to increased perceptions of pressure, workload, and stress. Finally, expected interruptions may result in modifications to both intensity and effort which may result in working at a rate that may not be desired or optimal (Vancouver, Weinhardt, & Vigo, 2014).

That said, there may also be several positive consequences that result from different types of workplace interruptions. For instance, workday breaks may rejuvenate employees, reducing daily fatigue and enhancing positive emotions (Trougakos Beal, Green, & Weiss, 2008; Trougakos, Hideg, Cheng, & Beal, 2014). In addition, certain types of distractions (e.g., music) may enhance the work experience by increasing individual perceptions of work satisfaction (Oldham, Cummings, Mischel, Schmidtke, & Zhou, 1995; Zijlstra, Roe, Lenora, & Krediet, 1999) or by filtering out other more burdensome distractions (Jett & George, 2003). Intrusions can also promote information transfer or enhance the quality of the exchange relationship between the two parties (Jett & George, 2003; Perlow, 1999). Finally, intrusions may facilitate the opportunity to discuss other important matters that would not have been brought up in conversation without the initial intrusion (Jett & George, 2003). In sum, interruptions may take many forms and can promote a wide range of consequences for both the interrupting party and the person being interrupted.

Distractions

Within the context of organizations, distractions are best described as

"psychological reactions triggered by external stimuli or secondary activities that interrupt focused concentration on a task" (Jett & George, 2003, p. 500). Distractions differ from other types of interruptions in that they are initiated outside the self and occur due to external stimuli that does not involve direct contact or correspondence with another person. For instance, distractions may arise from noise (e.g., hearing a nearby conversation or a copy machine), visual interference (e.g., external movement due to an open-office floor plan), or a physical disturbance (e.g., sitting under a cold air vent) (Evans & Johnson, 2000; Marsh, Hughes, & Jones, 2009; Rasila & Jylhä, 2015; Sundstrom, Bell, Busby, & Asmus, 1996; Sundstrom, Town, Rice, Osborn, & Brill, 1994).

Scholars have argued that the "distracting" component of distractions is due in large part to cognitive interference, which occurs when external stimuli draws upon or utilizes the same resources used to perform the task at hand (Gillie & Broadbent, 1989; Hirst & Kalmar, 1987; Jett & George, 2003; Wickens & Hollands, 2000). Multiple resource theory of divided attention suggests that this occurs because the resources needed for one task are being utilized or consumed by the distraction (Navon & Gopher, 1979; Wickens, 1980, 1984). In a similar vein, research on dual task interference suggests that cognitive interference occurs when simultaneous demands are placed on the same cognitive structure (Broadbent, 1958, 1984; Kahneman, 1973). That said, the extent to which cognitive interference occurs following a potentially distracting event depends in part on the characteristics of the environment. For instance, the similarity in form of the task at hand and the external stimuli may play a role in driving the extent of the distraction (Hirst, 1986; Wickens, 1980, 1984). Specifically, if a task and an external

stimulus are too similar in form (e.g., both auditory), the stimulus may become more distracting than if they were of two different forms (Rollins & Hendricks, 1980; Treisman & Davies, 1973).

Some have also argued that the extent to which potentially distracting stimuli impact an individual will depend on individual differences. Indeed, scholars have suggested that the ability of individuals to direct their attention is a skill that varies across people (Hirst, 1986; Hirst, Spelke, Reaves, Caharack, & Neisser, 1980; Spelke, Hirst, & Neisser, 1976). General personality characteristics may also guide responses to distractions. For instance, individuals high in Type A behavior pattern may have less patience or sensitivity to external stimuli that breaks their workflow or cognitive processing (Kirmeyer, 1988; Jett & George, 2003).

Traditional perspectives on outcomes of distractions at work suggest that they will have a negative impact on employees by inhibiting performance or learning, particularly when a job or task is complex (Jett & George, 2003). Indeed, the challenges that arise from trying to attend to multiple processes at once may cause cognitive processing to slow down or stop altogether (Hirst & Kalmar, 1987). However, there may also be some less considered positive consequences of distractions. For instance, tasks that are tedious and do not require a lot of mental processing may become more enjoyable with a distraction (e.g., music; Oldham et al, 1995; Zijlstra et al.,1999). In addition, certain distractions may aid in filtering out other, more burdensome distractions, ultimately enhancing work performance (Jett & George, 2003). In sum, distractions are a specific type of interruption driven by external stimuli that typically have negative consequences, but in some unique instances may actually benefit the distracted party.

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Breaks

Another type of work interruption that an individual might experience is a "break." Work breaks are defined as planned or spontaneous recesses from work tasks that disrupt task continuity (Jett & George, 2003). Breaks are distinguished from distractions and intrusions in that they are solely viewed as self-initiated or occurring due to a personal decision to halt the continuity or flow of an individual's work. Though breaks are self-initiated, the motivation or impetus for breaks may vary greatly. For instance, breaks may occur due to the progress an individual has made at work, an individual need or preference for a break, or a pre-determined time that one or several members have scheduled to take a break (Jett & George, 2003). Often times, breaks at work are taken in response to a lack of energy or higher than desired levels of work fatigue (Sonnentag, 2001), with the goal of either reducing fatigue or replenishing personal resources.

Breaks may also vary in their duration, occurring either within the workday (e.g., having a cup of coffee; Trougakos et al., 2008) or outside of the workday (e.g., stopping work for the day or taking a vacation; Fritz & Sonnentag, 2005; Fritz & Sonnentag, 2006; Westman & Eden, 1997). Within workday breaks may take many different forms, such as socializing, exercising, halting your work progress to eat or drink, running errands, or pausing progress on one task to make progress on another task. As Trougakos et al., (2008) suggest, one way to distinguish different types of within workday breaks is through characterization as either a "respite" or a "chore." Through this characterization, we can differentiate between breaks that are likely to be viewed favorably by employees and/or promote positive work outcomes (e.g., socializing, lunch breaks, focusing energy

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on a hobby) from breaks that are less likely to be viewed favorably and may be more likely to lead to negative work consequences (e.g., switching to another work task or running an errand).

Breaks may also have both long-term and short-term effects for employees. The long-term effects of breaks have typically been examined following breaks that occur outside the workday (e.g., evenings, weekends, and vacations). For instance, scholars have shown that evening activities that involve social, physical, or low effort activities may promote personal well-being, whereas directing attention toward work-related matters in the evening may negatively impact well-being (Sonnetag, 2001). In addition, work has shown that weekend breaks characterized by nonwork hassles relate negatively to valued work outcomes (e.g., well-being and subsequent job performance), whereas social activity and positive work reflections are likely to have benefits for workers after returning to work (Fritz & Sonnentag, 2005). Finally, scholars have shown that extended breaks (e.g., vacations) can have positive benefits for health and exhaustion (Fritz & Sonnentag, 2006; Westman & Eden, 1997). That said, there is still a lack of consensus concerning whether vacations improve subsequent task performance (e.g. Westman & Aharon-Madar, 1998) or have little to no effect on task performance (e.g., Fritz & Sonnentag, 2006).

The short-term effects of breaks have largely been considered through the lens of within-day work breaks (e.g., Boucsein & Thum, 1997; Henning, Jacques, Kissel, Sullivan, & Alteras-Webb, 1997; Trougakos et al., 2008; Trougakos et al., 2014). Though scholars began largely with an emphasis on break frequency and timing, more recent work has considered the implications of within-day break content. Indeed, a key

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component of breaks involves their ability to promote recovery and replenishment of physical and psychological resources (Fritz, Ellis, Demsky, Lin, & Guros, 2013). For instance, Trougakos et al., (2008) examined the role that different break activities played in daily recovery, finding that "low-effort" activities such as socializing or relaxing resulted in enhanced positive emotions and reduced negative emotions, whereas "high-effort" activities such as errands did not impact positive emotions but enhanced negative emotions. Expanding this work, scholars have suggested that perceptions of autonomy (e.g., decision-control regarding how to spend your break) play a role in the relationship between break activities and daily fatigue. Specifically, low levels of autonomy promote greater levels of work fatigue, regardless of whether break activities are characterized as "respites" or "chores" (Trougakos et al., 2014).

In sum, breaks represent a self-initiated interruption that may vary based on a variety of factors, including but not limited to duration, frequency, timing, content, and autonomy. These factors, in turn, have implications for a variety of employee outcomes including recovery, emotional exhaustion, positive and negative affect, and job performance.

Intrusions

One final type of interruption that an individual may experience is an intrusion. Within the context of organizations, an intrusion is best described as "an unexpected encounter initiated by another person that interrupts the flow and continuity of an individual's work and brings that work to a temporary halt" (Jett & George, 2003, p. 495). Examples of workplace intrusions include a work colleague stopping by to make small talk, have a personal conversation, request an update on task progress, or assign a

new work task. Intrusions are distinguished from both breaks and distractions in that (1) they are initiated outside the self and (2) they are initiated by other people. As noted previously, breaks are interruptions initiated by the self, which include events such as going to get coffee. Distractions are typically due to environmental stimuli, such as an exceptionally loud copy machine, and are not necessarily initiated by other people (Jett & George, 2003).

Intrusions may take many forms, and as I will argue, the content of an intrusion is likely to play a key role in driving employee reactions to the intrusion and subsequent behavior. One common type of intrusion involves an individual interrupting your workflow to have a personal conversation or to make "small talk." Scholars have referenced these types of interruptions when referring to those intrusions that are best described as a "personal visit" (Jett & George, 2003) or a "social conversation" (Perlow, 1999). Though these types of intrusions may include any number of topics, they are unique in that they only involve the discussion of non-work-related topics. Another common intrusion involves an individual interrupting your workflow to either assign new tasks or check on the status of a task. For instance, a supervisor may knock on an employee's door to assign "new and urgent work" (Perlow, 1999), or a colleague may stop by an employee's desk to "gather real-time information" on current task assignments (Jett & George, 2003). A key distinguishing factor of these types of intrusions is that they are work-related and focused on either new or existing work of the person being intruded upon.

It stands to note that conceptual and empirical challenges exist concerning the distinction between intrusions and interruptions. As Jett & George (2003) note,

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interruptions represent an umbrella construct, of which intrusions are one type. However, scholars have often confounded intrusions with interruptions, suggesting that they are describing or empirically examining "interruptions," when in fact they are actually referencing one specific type of interruption—an intrusion (e.g. Kirmeyer, 1988; Freeman & Muraven, 2010; Parke et al., 2018; Perlow, 1999). This distinction is important for several reasons. First, referring to intrusions as interruptions presents the possibility for construct deficiency through failure to include other types of interruptions (e.g., breaks and distractions). Second, confounding these constructs makes it more difficult to unpack what we know about intrusions specifically as opposed to interruptions more generally. Thus, though the work that I touch upon subsequently addresses intrusions specifically, many of the scholars referenced refer to these occurrences as interruptions.

Much of the work that has examined workplace intrusions has considered their negative consequences. For instance, a field study with radio dispatchers examined the impact of intrusions which forced the dispatchers to either put their current work aside or work on multiple tasks concurrently. These incidents led to greater role overload and increased coping actions, such as spending less time than usual on core job tasks or providing less individualized attention to those seeking assistance (Kirmeyer, 1988). Similar results have been found in laboratory experiments. One such study found that interrupting participants as they neared the completion of a task led to increased depletion and decreased performance (Freeman & Muraven, 2010). In addition, a qualitative investigation of engineers revealed that as colleagues disrupted them too frequently, the engineers expressed difficulty in completing their work assignments (Perlow, 1999).

Relatedly, Parke et al. (2018) found that interruptions diminished the effectiveness of time management. As a final example, Lin et al. (2013) found that workplace intrusions also have a negative impact on employees through the promotion of emotional exhaustion and anxiety.

Though empirical work has largely avoided investigations into the positive consequences of intrusions, scholars have hinted that there may be some benefits to workplace intrusions. Intrusions may first have positive relational consequences. Indeed, certain intrusions provide the opportunity to provide support to another individual or to develop interpersonal bonds (Jett & George, 2003; Perlow, 1999), which may promote friendship at work and/or improve the quality of the exchange relationship. Intrusions may also promote positive task-related consequences, allowing for the transmission of information that is highly relevant for an individual's task work (Kotter, 1982; Sutton & Kelley, 1997). Some have argued that interruptions stimulate or help maintain arousal for unfinished tasks (Pieters & Van Raaij, 1988; Zeigarnik, 1927), which may have positive affective or task-related consequences for the interrupted party (Strongman & Burt, 2000). Intrusions may also have benefits for the interrupting party, allowing for the transmission of important information in real-time (Jett & George, 2003). Finally, some have argued (e.g., Jett & George, 2003) that intrusions provide individuals with an opportunity or springboard to transition to other beneficial conversations that would not have occurred if not for the intrusion. As such, intrusions may be best characterized as a dynamic construct that may have both positive and negative consequences depending on a variety of factors.

Although scholars have yet to identify a taxonomy of intrusions, two broad

classes of intrusions emerge from a review of the literature—non-role and in-role. *Non-role intrusions* occur when an employee who is focused on a work-related task experiences an unexpected encounter in which a colleague wants to talk about a non-work topic. For example, a colleague stopping by an employee's desk for a "personal visit" (Jett & George, 2003) or a "social conversation" (Perlow, 1999) would constitute a non-role intrusion. *In-role intrusions* occur when an employee who is focused on a work-related task experiences an unexpected encounter or unplanned meeting in which someone at work wants to talk about the employee's new or existing tasks. For example, a supervisor knocking on an employee's door to assign "new and urgent work" (Perlow, 1999) or stopping by an employee's desk to "gather real-time information" on current task assignments (Jett & George, 2003) would constitute an in-role intrusion. Though intrusions have yet to be categorized in this fashion, these two types of intrusions broadly capture the predominant forms of workplace intrusions identified in the literature (Holmes, 2000; Holmes & Stubbe, 2015; Jett & George, 2003; Kaufmann & Beehr, 1986; Kirmeyer, 1988; Lin et al., 2013; Perlow, 1999).

In sum, intrusions are a dynamic construct that are highly relevant to employees. Intrusions are both prevalent and expected in modern work environments where collaboration is heavily emphasized through characteristics of organizational climate and office design. The content of intrusions may vary greatly, and yet we know little of how intrusion content impacts employee responses to intrusions. Though scholars have suggested that intrusions may have both positive and negative consequences, we know much more about the potential negative consequences than the positive ones. In addition, we know little about how different types of intrusions may indirectly affect valued

employee outcomes. As such, an investigation into the dynamic nature of workplace

intrusions should prove beneficial.

CHAPTER 3

THEORY AND HYPOTHESES

Overview of the Study Model

In the following section, I develop hypotheses designed to investigate the dynamic effects of both non-role and in-role intrusions. First, I consider how non-role and in-role intrusions impact worker engagement, predicting differential effects on engagement based on the type of intrusion received. Second, I examine the role that both non-role and in-role intrusions play in promoting collaboration, predicting that both types of intrusions will enhance collaboration. Third, I examine the indirect effects of both types of intrusions on task-focused citizenship through engagement and person-focused citizenship through collaboration.

I first consider the relationship between non-role intrusions and engagement. I argue that non-role intrusions will negatively relate to engagement for three critical reasons. First, non-role intrusions divide attention between work and non-work. This is detrimental to engagement because individuals struggle to attend to multiple cognitive aims simultaneously (Boring, 1950; Kahneman, 1973). Second, individuals incur a switching cost following the abrupt shift of cognitive focus (Meiran, Chorev, & Sapir, 2000). This switching cost is likely to require a large mental reconfiguration for individuals who are switching between a work and non-work focus (Goschke, 2000; Meiran, 2000). Third, individuals often require a long time to regain focus on a task once attention has shifted (Goleman, 2013). This is likely to be exacerbated by the differential nature of work tasks and personal conversation.

I next consider the relationship between in-role intrusions and engagement, arguing that in-role intrusions will be positively related to engagement. A core theoretical argument for the view that intrusions are detrimental is that they increase workload and time pressure (Jett & George, 2003). However, individuals tend to respond to increased workload and time pressure in ways that are likely to facilitate increased engagement. Indeed, these types of job demands may serve to motivate or prompt action (Cavanaugh, Boswell, Roehling, & Boudreau, 2000; LePine, Podsakoff, & LePine, 2005), increasing attentiveness to daily tasks (Rodell & Judge, 2009), absorption (Mauno, Kinnunen, & Ruokolainen, 2007), and engagement (Crawford, LePine, & Rich, 2010; Rodell & Judge, 2009). In addition, increased time pressure and workload are likely to promote behavioral coping responses (Latack & Havlovic, 1992; LePine et al., 2005). One likely coping response to increased job demands is additional engagement directed toward work tasks.

Next, I consider the indirect effect of non-role and in-role intrusions on task-focused citizenship through engagement. Task-focused citizenship captures employee behaviors that go beyond the normal scope of work responsibilities and help to resolve work- and organization-related issues (Settoon & Mossholder, 2002). I argue that there will be a negative indirect effect of non-role intrusions and a positive indirect effect of in-role intrusions. As employees experience non-role intrusions, they will likely incur significant switching costs, which call for large mental reconfigurations. These costs are likely to result in reduced engagement, which will subsequently lead to less task-focused citizenship. Conversely, I argue that employees will have greater levels of engagement following in-role intrusions. As employees increase attention and effort to address the

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demands of these in-role intrusions, they should experience an increase in engagement, thereby facilitating task-focused citizenship.

I next consider the relationship between non-role intrusions and collaboration. I argue that non-role intrusions will be positively related to work-focused collaboration. Collaboration is often driven by unplanned encounters that transition into work-related exchanges (Waber et al., 2014). This is likely to occur following a non-role intrusion for two key reasons. First, small talk facilitates transitions into and out of task-related conversations (Holmes, 2000; Holmes & Stubbe, 2015). Second, small talk may serve as a cue, suggesting that an individual is comfortable or receptive to working jointly on a task or project (Isbister & Nass, 2000).

I also consider the relationship between in-role intrusions and collaboration, arguing that in-role intrusions will be positively related to collaboration. In-role intrusions initiate a dialogue surrounding a work task, which is likely to facilitate collaboration for a few reasons. First, in-role intrusions provide employees the ability to receive feedback, give feedback, or to share information that may not always be shared by more formal means (Jett & George, 2003). Second, in-role intrusions provide a natural opportunity for employees to transition to other work topics, creating a dialogue that facilitates discussing ideas and sharing information about other work-related matters (Rousseau et al., 2006). Third, in-role intrusions may enhance the quality of communication between coworkers (Jett & George, 2003), improving the exchange relationship and enhancing the likelihood that individuals would be motivated to interact further.

Finally, I consider the indirect effect of non-role and in-role intrusions on person-focused citizenship through collaboration. Person-focused citizenship is characterized as helping behavior directed toward colleagues that generally manifests as social support, counseling, or demonstrations of concern (Settoon & Mossholder, 2002). I argue that both non-role and in-role intrusions will have a positive indirect effect on person-focused citizenship through collaboration. Collaboration allows coworkers to work jointly on tasks. As scholars have noted (e.g., Liang et al., 2015), individuals who work jointly are more likely to engage in helping behaviors. As such, I expect that both non-role and in-role intrusions will enhance the extent to which individuals work jointly. In turn, individuals who collaborate more frequently should have both the opportunity and desire to engage in helping behaviors towards their colleagues, resulting in increased person-focused citizenship.

Non-Role Intrusions and Engagement

I first turn to Jett and George's (2003) theoretical framework to explore whether intrusions can lead employees to more fully engage with *their* work. Engagement captures the extent to which employees invest physical, emotional, and cognitive energy into their work roles (Kahn, 1990, 1992). In this regard, engagement serves as a mechanism that assists in the attainment of other valued outcomes, such as increased task performance and citizenship behavior (Rich et al., 2010). To date, research has primarily considered how intrusions may diminish employee attention, thus adversely affecting performance. For instance, scholars have shown that as employees experience demands that draw their focus away from work, performance may suffer (Speier et al., 1999). My choice of engagement as a potential mechanism was motivated by previous research that

has examined intrusions from attentional and engagement perspectives (e.g., Jett & George, 2003; Schneider & Fisk, 1982; Speier et al., 1999). I theorize that engagement is a key mechanism that is likely to (1) be affected by intrusions and (2) have an impact on organizationally relevant outcomes.

I first consider the impact of non-role intrusions (e.g., a coworker stopping by to ask about an employee's weekend) on engagement. Non-role intrusions should negatively relate to engagement for three reasons. First, non-role intrusions divide attention between work and non-work. This is problematic, given that people struggle to attend to multiple cognitive aims simultaneously (Boring, 1950; Kahneman, 1973). Due to the nature of intrusions, employees are forced to divert their attention from their immediate tasks. When mental connections to the task at hand are disrupted, cognitive energy is temporarily directed toward the content of the intrusion. These disruptions are especially salient for non-role intrusions, as their content is likely to differ greatly from that of task-focused efforts. Scholars have noted that these types of cognitive transitions may lead to a reduction or elimination of cognitions directed toward the initial task (Leroy, 2009), thereby dividing attention (Kahneman, 1973). In short, non-role intrusions disrupt and shift attention to such a large extent that employees will struggle to invest their cognitive, physical, and emotional energies into their tasks.

A second reason why non-role intrusions should negatively relate to engagement is that individuals are likely to incur a switching cost (Meiran et al., 2000) following the receipt of a non-role intrusion. A switching cost speaks to the observed phenomenon that individuals tend to see a significant decrease in performance following a rapid shift between different tasks (e.g., Allport, Styles, & Hsieh, 1994; Biederman, 1972; Rogers &

Monsell, 1995). This first highlights the amount of mental reconfiguration necessary to shift between a work and non-work focus. As scholars have noted, switching between work and non-work domains is likely to require a large mental reconfiguration (Goschke, 2000; Meiran, 2000), which should result in a substantial switching cost. In addition, individuals may experience breaks in cognitive inertia that they struggle to recover from (Allport et al., 1994).

Building on what we know about divided attention and switching costs, one final reason that non-role intrusions should relate negatively to engagement is that individuals will likely struggle to regain focus on their initial task following a non-role intrusion. Individuals often require a long time to regain focus on a task once attention has shifted (Couffe & Michael, 2017; Goleman, 2013; Mark et al., 2005). Moreover, the ability of individuals to effectively refocus on the initial task is likely to stem, in part, from the extent to which their cognitive attention was steered away from task-focused aims. Thus, as individuals experience non-role intrusions, I anticipate that they will have increased difficulty regaining focus toward task-related aims, ultimately leading to less engagement.

Hypothesis 1: Non-role intrusions are negatively related to engagement.

In-Role Intrusions and Engagement

I next consider the impact of in-role intrusions (e.g., a coworker stopping by to check on the status of a current project) on engagement. The general consensus in the literature to date is that in-role intrusions play a significant role in promoting a number of *negative* employee outcomes, including depletion, strain, and time pressure (Freeman & Muraven, 2010; Kirmeyer, 1988; Lin et al., 2013; Perlow, 1999; Sonnentag, Reinecke,

Mata & Vorderer, 2018; Wilkes et al., 2018). Scholars have also hinted that intrusions will have a negative impact on engagement, noting that they "can hinder an individual's ability to reach a state of total involvement in the task being performed" (Jett & George, 2003). That said, I believe the type of intrusion received likely plays a pivotal role in guiding subsequent employee engagement. Specifically, whereas non-role intrusions should negatively relate to engagement, I expect that in-role intrusions will promote engagement.

Intrusions are typically conceptualized as debilitating for workers because they act as job demands that promote strain, depletion, and resource loss (Freeman & Muraven, 2010; Kirmeyer, 1988; Lin et al., 2013; Perlow, 1999). However, in-role intrusions are unique in the sense that the most likely demands they will induce are workload and time pressure to complete work tasks (Jett & George, 2003). Indeed, unlike non-role intrusions, in-role intrusions focus entirely on new and existing work. Whereas certain demands burden employees with unnecessary and unhelpful requirements, demands like workload and time pressure often serve to motivate or prompt action (Cavanaugh et al., 2000; LePine et al., 2005). Indeed, although in-role intrusions are likely to increase workload and time pressure, research indicates that time pressure and workload are often experienced as challenges that increase attentiveness to daily tasks (Rodell & Judge, 2009), absorption (Mauno et al., 2007), and engagement (Crawford et al., 2010; Rodell & Judge, 2009).

In addition, scholars have also shown that challenging job demands are often met with productive cognitive and behavioral coping responses (Latack & Havlovic, 1992; LePine et al., 2005), including increased engagement in work activities. Increased

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engagement in work tasks is an active coping response that should allow employees to manage the additional demands that accompany new assignments and requests for status updates on existing assignments. As such, although in-role intrusions increase demands on an employee's time, they also foster an increased focus and attention toward work. Indeed, meta-analytic research supports the notion that these types of demands increase engagement (Crawford et al., 2010). Supporting this assertion, between-person examinations have shown that individuals often cope with job demands by increasing attention to their immediate tasks (e.g., Pieters & Warlop, 1999). In sum, I expect that in-role intrusions will positively relate to engagement.

Hypothesis 2: In-role intrusions are positively related to engagement.

Indirect Effects of Intrusions on Task-Focused Citizenship

Engagement is an important consideration for organizations because it impacts key employee outcomes. One outcome of particular interest is *task-focused citizenship*— employee behaviors that go beyond the normal scope of work responsibilities and help to resolve work- and organization-related issues (Settoon & Mossholder, 2002). At its core, engagement is a motivational concept that captures the extent to which an individual invests their cognitive, physical, and emotional energies at work (Kahn, 1990). Specifically, engagement captures the intensity and persistence of resource allocation at work (Kahn, 1990). As individuals allocate their cognitive, physical, and emotional energies with greater persistence and intensity, a likely result is increased levels of task-focused citizenship. Indeed, meta-analytic evidence supports the notion that engagement plays a significant role in driving these "discretionary" role behaviors. (Christian et al., 2011).

Taken together, my model suggests intrusions will have indirect effects on task-focused citizenship through engagement. As employees experience non-role intrusions, which involve small talk or personal conversation, attention is shifted away from work-related matters. These non-work intrusions should incur cognitive switching costs that hamper employees' ability to engage in their tasks and, consequently, their participation in task-focused citizenship. Conversely, I predict that employees will have greater levels of engagement following in-role intrusions. As employees increase attention and effort to address the demands of these in-role intrusions, they should experience an increase in engagement, thereby facilitating task-focused citizenship.

> *Hypothesis 3a: Non-role intrusions have a negative indirect effect on task-focused citizenship through engagement.*

> *Hypothesis 3b: In-role intrusions have a positive indirect effect on task-focused citizenship through engagement.*

Non-Role Intrusions and Collaboration

Jett and George's (2003) proposal that intrusions can be positive was partially based on the notion that intrusions provide opportunities to collaborate with other members of the organization, thereby increasing the flow of information. In contrast, isolated employees are cut off from potentially beneficial flows of information. Building on this proposal, I first consider the benefits that might stem from increased collaboration with colleagues. Collaboration facilitates several important work behaviors (e.g., cooperation, coordination, and information exchange) that are likely to have an impact on valued work outcomes (Rousseau et al., 2006). Recognizing its importance, many organizations have instituted structural changes to increase collaboration. For example,

some companies have implemented office designs that remove physical barriers to collaboration, while others have reduced or eliminated employees' ability to telecommute (Pentland, 2012; Swisher, 2013).

I first consider the impact of non-role intrusions on collaboration. Though collaboration may often be facilitated by an organization's structure or by specific job design factors (e.g., working on project teams), there is also a portion of workplace collaboration that happens more organically. Indeed, collaboration often stems from unplanned encounters that transition into productive, work-related exchanges (Waber et al., 2014). For instance, a conversation that begins with a colleague stopping by to ask about an employee's weekend may organically transition into a conversation around a joint work project. In this instance, small talk may ease transitions into and out of task-related conversations (Holmes, 2000; Holmes & Stubbe, 2015), leading to increased collaboration between workers. In addition, small talk may serve as a cue that an individual is comfortable or receptive to working jointly on a task or project (Isbister & Nass, 2000). Indeed, in considering potential people to collaborate with on tasks, one potential means of deciding may involve defaulting to people that have shown an interest in communicating with you more generally. In sum, I expect that non-role intrusions will positively relate to collaboration.

Hypothesis 4: Non-role intrusions are positively related to collaboration.

In-Role Intrusions and Collaboration

I next consider the impact of in-role intrusions on collaboration. I anticipate that in-role intrusions will positively relate to collaboration for several reasons. First, in-role intrusions provide employees the opportunity to receive feedback, give feedback, or share

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information around the content of the in-role intrusion that may not always be shared by more formal means (Jett & George, 2003). For instance, conversations around work tasks are likely to coincide with discussions aimed at outlining and synchronizing work processes to avoid duplicating individual efforts (Cannon-Bowers, Tannenbaum, Salas, & Volpe, 1995). This type of information sharing has important implications for collaboration, as sharing task-related information and ideas has been identified as an integral part of collaborative behavior (Janz, Colquitt, & Noe, 1997; Tjosvold & Tjosvold, 1995).

In addition, in-role intrusions initiate a dialogue surrounding a work task, which is a natural opportunity for employees to discuss ideas and share information concerning other work (Rousseau et al., 2006). To illustrate, consider an employee who is intruded upon by a coworker requesting an update on a project. In the process of responding to that coworker, the employee has the opportunity to solicit input from the coworker and the coworker has an opportunity to provide information that may be helpful for completing the task (Jett & George, 2003). The intrusion may also spark collaboration by providing the employee with an immediate opportunity to discuss other joint tasks. Thus, although the in-role intrusion temporarily redirected the employee's attention, it provided access to helpful information and an opportunity for collaboration. Addressing this notion, Jett and George (2003) proposed that intrusions provide opportunities for information sharing and feedback at work that are "unlikely to occur through more established means."

Finally, in-role intrusions may enhance the quality of communication between coworkers (Jett & George, 2003), improving the exchange relationship and enhancing the

likelihood that individuals may be motivated to work jointly. Work on multiplex friendships—relationships that include both a personal component and a work-focused component (e.g., Ingram & Zou, 2008; Methot, LePine, Podsakoff, & Christian, 2016)—supports this notion. Indeed, relationships that involve both a business and friendship aspect typically involve greater mutual investment and reciprocal action (Granovetter, 1973). In addition, having a multiplex friendship provides access to a richer pool of supportive resources from the other party (Albrecht & Adelman, 1987; Dutton & Heaphy, 2003; Ibarra, 1993). As these multifaceted relationships develop, workers should be more likely to seek and provide assistance to others, ultimately increasing collaboration. In sum, I expect that in-role intrusions will positively relate to collaboration.

Hypothesis 5: In-role intrusions are positively related to collaboration.

Indirect Effects of Intrusions on Person-Focused Citizenship

Although collaboration itself can be a desirable outcome for organizations, it also has implications for more "downstream" individual work outcomes. One aspect of employee performance that is especially relevant to collaboration is *person-focused citizenship*—helping behavior directed toward colleagues that generally manifests as social support, counseling, or demonstrations of concern (Settoon & Mossholder, 2002). Collaboration provides opportunities to help others—by providing support or expressing concern—that are not present when employees work in isolation. One reason this occurs is that collaboration often involves the receipt of help from others (McGrath, 1991; Salas, Sims, & Burke, 2005). As individuals receive help from others, social exchange theory (Blau, 1964) suggests that the individual receiving help should be highly motivated to reciprocate by providing help in return.

Collaboration may also provide individuals with additional knowledge of the activities and requirements of other members of the organization, offering additional opportunities to engage in helping behaviors. For instance, working cooperatively on a task with a coworker may bring to light an issue that a coworker is having on a separate task, offering the employee an opportunity to provide that coworker with some task-relevant knowledge that otherwise would not have been available. Supporting these proposals, recent empirical work has found that when employees work jointly they are more likely to engage in helping behaviors (Liang et al., 2015). In short, I predict that employees who collaborate more frequently will have both the opportunity and desire to engage in helping behaviors towards their colleagues, resulting in increased person-focused citizenship.

Taken together, I predict that intrusions will have indirect effects on person-focused citizenship. Intrusions throughout the workday provide an opportunity for employees to collaborate with their colleagues. Non-role intrusions should facilitate transitions to task-related conversations and serve as a signal that an individual is willing and able to work jointly, promoting collaboration. In-role intrusions may enhance relationship quality, provide an opportunity for information sharing, and provide a natural opportunity for a transition to other work topics, thereby promoting collaboration. Further, as collaboration increases, employees are more likely to engage in person-focused citizenship. In sum, I propose that both non-role and in-role intrusions will lead to increased collaboration, which in turn will enhance person-focused citizenship.

Hypothesis 6a: Non-role intrusions have a positive indirect effect on person-focused citizenship through collaboration.

Hypothesis 6b: In-role intrusions have a positive indirect effect on person-focused citizenship through collaboration.

CHAPTER 4

METHODS

Study 1 Item Development

Given that previous research has not distinctly operationalized multiple types of

intrusions, it was first necessary to develop measures of workplace intrusions. I started by

following Hinkin and Tracey's (1999) content validation procedure, which quantitatively

assesses the extent to which items reflect a conceptual definition (MacKenzie, Podsakoff,

& Podsakoff, 2011). First, I created items for each of the two types of intrusions that

reflected my conceptual definitions. I then asked 201 participants, recruited via

Amazon's MTurk, to rate the extent to which the items matched the conceptual

definitions. The items for non-role intrusions were prefaced with "Today, while focused

on a work-related task, people at work...," and included "Stopped by to socialize,"

"Reached out to chat about non-work things," and "Engaged me in small talk." The items

for in-role intrusions were prefaced with "Today, while focused on a work-related task,

people at work...," and included "Requested that I take on a new work task," "Reached

out to include me in a new project," "Asked me about the status of a task I was assigned,"

and "Inquired about how I am progressing on one of my tasks." The average age of

participants was 40 years old ($SD = 12.18$) and 42 percent of participants were female.

Average work experience was 18 years ($SD = 11.58$).

Each participant was randomly assigned to one of two conditions. In each

condition, one of the two intrusions definitions was presented, along with the items for

both types of intrusions. Participants then rated the correspondence between the items

and the conceptual definition using a seven-point scale (1 = *Item is an extremely bad*

match to the definition to 7 = *Item is an extremely good match to the definition*). For example, participants in the non-role intrusions condition were asked to rate the correspondence of the non-role and in-role items to the non-role intrusions definition. I then tested whether the items for a given type of intrusion had (1) appropriately high mean levels of correspondence to their own definition and (2) higher mean levels of correspondence than the items for the other intrusion construct.

As a subsequent step, scholars have recommended that a confirmatory factor analysis be conducted on measures that have been subjected to the previously outlined content validation (MacKenzie et al., 2011). Therefore, I supplemented my initial results with a confirmatory factor analysis of the two intrusions constructs. Utilizing MTurk, I recruited a new sample of 126 participants to quantitatively rate the extent to which they experienced each type of intrusion in their current work day. The average age of participants was 32 years ($SD = 8.60$); 33 percent of participants were female. Their average work experience was 11 years ($SD = 8.44$). Criteria for eligibility was that participants be employed full-time and have attended work on the day they completed the survey. These criteria ensured that they recently had the opportunity to experience an intrusion.

Study 1 Sample and Procedure

To test the hypotheses outlined in Chapter 3, I first utilized experience sampling methodology (ESM). I approached my research questions using ESM for several reasons. First, a within-person approach is consistent with my theorizing surrounding intrusions, which are unpredictable by nature and vary on a day-to-day basis (Jett & George, 2003; Kirmeyer, 1988). Second, given the potential for the frequency and type of intrusion to

vary on a daily basis, a within-person approach allowed me to capture these dynamics in a way that accurately reflects a representative sampling of employees' immediate workplace experiences (Beal, 2015; Liu, Zhan, & Wang, 2011; Weiss & Rupp, 2011). Finally, a daily, within-person research design is also consistent with other research examining perceptions and behaviors that vary on a daily basis (e.g., Courtright, Gardner, Smith, McCormick, & Colbert, 2016; Koopman, Lanaj, & Scott, 2016; Scott, Matta, & Koopman, 2016).

My sample consisted of 70 employee–coworker dyads who were all scientists in an organization specializing in metallurgy development, manufacturing, and testing. The average age of employees was 47 years old ($SD = 7.95$). 85 percent of employees were male and average tenure at the company was 17 years ($SD = 8.26$). The average age of coworkers was 39 years old ($SD = 10.49$). 83 percent of coworkers were male and average tenure at the company was 12 years ($SD = 9.24$). I was initially provided with 99 employee–coworker dyads that the company, headquartered in India, randomly paired, following my instruction that members of each dyad needed to be part of the same work group. This instruction was given to ensure that dyads had sufficient interaction to provide variance in my constructs of interest during the course of the study. I used random pairing in order to limit the possibility that selection biases would influence my results. A colleague of mine requested participation from the employees and coworkers via an on-site meeting that briefed them on the design of the study. Potential participants were then emailed a survey that allowed them to register to participate and assessed demographic information.

Employees and coworkers who opted-in to the study completed daily surveys

over the course of three full work weeks (i.e., 15 consecutive work days; Monday–

Friday). Each day, employees received a survey at 12 p.m. which asked them to report

the extent to which they had experienced both types of intrusions so far that day. I chose

12 p.m. as the initial survey time to grant employees enough time following the start of

their work day to experience intrusions. Near the end of each workday—4 p.m.—

employees received a follow-up survey that asked them to report on their daily level of

engagement and collaboration with coworkers. Each day at 4 p.m. I also sent a survey to

each employee's coworker. This survey requested an assessment of the focal employee's

daily task- and person-focused citizenship behavior. Administering this survey at 4 p.m.

provided a window of time to capture changes in employee behaviors following the

intrusions they experienced earlier that day. An important factor in my decision to utilize

coworker assessments of employee citizenship at the end of the day was to mitigate

concerns regarding common method bias. Research indicates that source and time

separation are two of the most effective approaches for limiting this potential bias (Doty

& Glick, 1998; Podsakoff, MacKenzie, Lee, & Podsakoff, 2003).

In total, 81 employee–coworker dyads had at least one complete day of surveys.

Suggested best-practices for experience sampling studies recommend that scholars should

only include cases with at least three days of data (e.g., Singer & Willett, 2003;

Trougakos et al., 2014). After following this direction, I had a final sample of 70

employee–coworkers dyads, comprising 613 days of complete data—an average of 8.76

days per dyad.

Study 1 Measures

Intrusions. Using my validated measures, the scientists in my sample were asked

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to rate the extent to which their colleagues had engaged in the listed behaviors that morning. The items for both non-role and in-role intrusions were prefaced with "Today, while focused on a work-related task, people at work...". All items were measured on a 6-point Likert scale ranging from 1 = *not at all* to 6 = *a great deal*.

Engagement. The employees reported their level of engagement using six items from the nine-item measure of job engagement from Crawford, LePine, and Buckman (2013), which was adapted from the Rich et al. (2010) measure of job engagement. I used 2 items from each facet of engagement (cognitive, emotional, and physical). Sample items included "I devoted a lot of energy to my job," "I put my feelings into my job," and "I concentrated completely on my job." The items were measured on a 6-point Likert scale ranging from 1 = *not at all* to 6 = *a great deal*.

Collaboration. Focal employees rated their level of collaboration using a three-item scale adapted from Kahn and Mentzer (1998) to function at the daily level. Items were, "Today, my workgroup has collaborated on work assignments," "Today, we have worked jointly as a workgroup on work tasks," and "Today, my workgroup has worked closely on projects together" (α = .92). The items were measured on a 6-point Likert scale ranging from 1= *strongly disagree* to 6 = *strongly agree*.

Task-focused citizenship. Task-focused citizenship was assessed by the coworker using three items adapted from Settoon and Mossholder (2002) for use in an ESM format. Sample items included "Took on extra responsibilities to help coworkers when things got demanding at work" and "Assisted coworkers with heavy work loads even though it was not part of the job." The items were measured on a 6-point Likert scale ranging from 1 = *not at all* to 6 = *a great deal*.

Person-focused citizenship. Person-focused citizenship was assessed by the coworker using three items adapted from Settoon and Mossholder (2002) for use in an ESM format. Sample items included "Showed concern and courtesy toward coworkers" and "Took time to listen to coworkers' problems and worries." The items were measured on a 6-point Likert scale ranging from 1 = *not at all* to 6 = *a great deal*.

Study 1 Data Analysis

Given that ESM data is multilevel in nature (i.e., days nested within individuals), I used multilevel path analysis within Mplus 8 (Muthén & Muthén, 2010) to test my hypotheses. All daily variables were specified at the within-person level (Level 1) using random slopes for the hypothesized pathways (for similar see Ilies, Liu, Liu, & Zheng, 2017; Koopman et al., 2016; Wang, Liu, Liao, Gong, Kammeyer-Mueller, & Shi, 2013). Consistent with recommendations in the literature (e.g., Hofmann & Gavin, 1998; Ohly, Sonnentag, Niessen, & Zapf, 2010), I group-mean centered exogenous variables. One key benefit of group-mean centering is that it removes all between-person variance from the level-1 predictors (Enders & Tofighi, 2007), effectively eliminating between-person confounds (e.g., personality) and several potential sources of same-source bias (e.g., social desirability, acquiescence, and common rater effects; Matta, Scott, Colquitt, Koopman, & Passantino, 2017; Podsakoff et al., 2003). The direct effects of non-role and in-role intrusions on person- and task-focused citizenship were also modeled, as they are necessary in order to conduct unbiased tests of the indirect effects (MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002). In Table 2, I report the amount of variance in each construct at the within- versus the between-person level. The use of multilevel analysis was supported, given that within-person variance accounted for 37 percent to 60

percent of the variability in each construct.

My indirect effect hypotheses were tested using a parametric bootstrap, as recommended by Preacher, Zyphur, and Zhang (2010). I utilized a Monte Carlo bootstrap with 20,000 simulations to determine the magnitude of indirect effects and to construct bias-corrected confidence intervals (Preacher & Selig, 2012). Following recent multilevel research (e.g., Koopman et al., 2016; Lanaj, Johnson, & Barnes, 2014; Wang et al., 2013), I used a 95 percent bias-corrected confidence interval to determine the statistical significance of hypothesized indirect effects.

Study 2 Sample and Procedure

I next conducted an experimental ESM (c.f. Woolum, Foulk, Lanaj, & Erez, 2017) utilizing a daily critical incident approach (c.f. Wellman, Mayer, Ong, & DeRue, 2016). There are several benefits to this specific type of investigation. First, a critical incident approach is beneficial when you are interested in capturing an individual's responses to discrete events (Flanagan, 1954). Given my aim to capture employee responses to specific intrusion events, a critical incident approach appears uniquely relevant. Utilizing a within-person methodology also provides the added benefit of reducing concerns around common method variance, such as response tendency bias (Gabriel et al., 2019). Finally, utilizing an experimental design with random assignment to condition provides additional control by removing confounds related to "buildup effects or cross-day effects" (Woolum et al., 2017, p. 1668).

My sample for this study was 139 full-time employees who were employed in fields such as healthcare, sales, education, and finance. The sample consisted of professional MBA students from a large Southwestern university and up to one coworker

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of each participating MBA student. For the purposes of this study, the students and coworkers were equivalently treated as focal participants, hereafter referred to as "employees." The MBA students received course credit for participation; coworker recruits received a $20 online gift card. I utilized a hybrid snowball technique to recruit participants. 88 students were enrolled in the class, and all students were invited to participate. 75 registered to participate, representing an 85% participation rate. 73 coworkers were invited to participate by students registered in the study. 64 registered to participate, representing an 88% participation rate. The average age of all employees was 34 years old ($SD = 7.68$) and average organizational tenure was 4.63 years ($SD = 5.13$). 40% of employees were female.

One week prior to the launch of the daily surveys, employees were invited to register for the study and to provide demographic information. They were instructed that they would be completing a daily survey around mid-day for 12 consecutive work days. Each day, participants were randomly and evenly assigned to either the non-role, in-role, or control condition. This "constrained" randomization assures that each participant is assigned to each condition on 4 separate days, with a random pattern (c.f. Woolum et al., 2017). In all conditions on all days, the survey focused the employees on their experiences "today." On days when assigned to the non-role condition, employees were asked to recall and summarize their most recent non-role intrusion, described as the "most recent instance when you were working on a task and somebody stopped by to discuss a non-work-related topic (e.g., have a personal conversation, make small talk, etc.)." When assigned to the in-role condition, employees were asked to recall and summarize their most recent in-role intrusion, described as the "most recent instance

when you were working on a task and somebody stopped by to discuss a work-related topic (e.g., assign new work, ask for a status update, discuss a current project, etc.)." When assigned to the control condition, employees were asked to "describe your experiences at work today."

Employees next rated their engagement and collaboration. When assigned to either the non-role or the in-role condition, employees were asked to rate their engagement and collaboration following the intrusion they identified and described. When assigned to the control condition, participants were asked to think about their general experiences that day when rating their engagement and collaboration. This resulted in 906 days of data across 139 full-time employees—an average of 6.52 days per employee.

Study 2 Measures

Engagement. Employees reported their level of engagement using the nine-item measure of job engagement from Crawford, LePine, and Buckman (2013), which was adapted from the Rich et al. (2010) measure of job engagement. This measure is comprised of three facets and includes three items from each facet: physical engagement, emotional engagement, and cognitive engagement. Participants were instructed to have their "tasks" as the target of engagement. Sample items included "I devoted a lot of energy to my tasks," "I put my feelings into my tasks," and "I concentrated completely on my tasks." All items were measured on a 5-point Likert scale ranging from 1 = *strongly disagree* to = 5 *strongly agree*.

Collaboration. Employees rated their level of collaboration using a three-item scale adapted from Kahn and Mentzer (1998). The items were "I worked closely on

projects with my coworkers," "I collaborated with my coworkers on work assignments," and "I worked jointly with other members of my organization on work tasks." All items were measured on a 5-point Likert scale ranging from 1= *strongly disagree* to 5 = *strongly agree*.

Study 2 Data Analysis

I used multilevel path analysis within Mplus 8 (Muthén & Muthén, 2010) to test my hypotheses. Exogenous variables were specified at the within-person level (Level 1) using random slopes for the hypothesized pathways (e.g., Ilies et al., 2017; Koopman et al., 2016). To test the effects of non-role intrusions on both engagement and collaboration, I utilized a within-person comparison of the non-role intrusion condition versus the control condition. This involved creating an independent variable coded as "1" for all observations in the non-role condition and a "0" for all observations in the control condition. Similarly, to test the effects of in-role intrusions on both engagement and collaboration, I utilized a within-person comparison of the in-role condition versus the control condition. This involved creating an independent variable coded as "1" for all observations in the in-role condition and a "0" for all observations in the control condition.

Study 3 Sample and Procedure

In Study 3 I examined my first stage hypotheses with an online experiment using 201 participants recruited through Prolific. One benefit of using an experiment to investigate intrusions is that it can provide additional evidence of the causal direction of intrusions and my predicted outcomes. In addition, an experiment allows for greater control over the types of intrusions that individual's experience and respond to.

Participants earned a flat fee of $3 for their participation. Given that I expected the experiment to take participants approximately 15 minutes complete, payment of $3 represented an expected $12 hourly rate. The average age of all participants was 34 years old ($SD = 10.71$) and average full-time work experience was 13 years ($SD = 9.66$). 70% of participants were female.

In this study, I conducted an online experiment with random assignment to condition (non-role condition, in-role condition, control condition). During the recruitment process workers were told that they would be helping to validate transcription software designed for use in future research, and thus would be asked to review and provide corrections for several transcriptions. I used this specific task design as it mirrors one type of task that crowd workers often complete (Evanini, Higgins, & Zechner, 2010; Marge, Banerjee, & Rudnicky, 2010; Schmidt, 2015), and thus provides for a more typical task experience and a reasonable cover for the underlying experiment. To manipulate intrusions, participants were told that they would be paired with another individual who would be completing the same transcriptions at the same time, as that would provide the researchers with additional confidence in the proposed corrections. Unbeknownst to participants, this person was an electronic confederate. I utilized an electronic confederate for my manipulations as that provided all participants with a consistent experience and allowed me to reduce systematic and random error variance that is often associated with utilizing human confederates (Leavitt, Qiu, & Shapiro, 2019).

All participants were assigned four short transcriptions to review and provide corrections. In the in-role condition, participants were intruded upon by the confederate at

three different times over the course of completing the transcriptions with an in-role intrusion, such as "What types of errors are you finding?" Participants in the non-role condition were intruded upon three times with a non-role intrusion, such as "What did you have for dinner last night?" After each intrusion, participants were given the opportunity to respond to the confederate. If participants chose to respond, the confederate provided an additional follow-up message to the participant's response. In addition, participants were also given the opportunity to send an unsolicited message to the confederate while completing the tasks. In the control condition, participants did not receive any intrusions. However, to mirror the intrusions conditions, they did have the opportunity to send a message to the confederate. Following the completion of the tasks, participants were asked to rate their level of engagement on the tasks and their collaboration with their partner.

Study 3 Measures

Engagement. Participants reported their level of engagement using the nine-item measure of job engagement from Crawford et al. (2013), which was adapted from the Rich et al. (2010) measure of job engagement. This measure is comprised of three facets and includes three items from each facet: physical engagement, emotional engagement, and cognitive engagement. Participants were instructed to have their "tasks" as the target of engagement. Sample items included "I devoted a lot of energy to my tasks," "I put my feelings into my tasks," and "I concentrated completely on my tasks." All items were

measured on a 5-point Likert scale ranging from 1 = *strongly disagree* to = 5 *strongly agree*.

Collaboration. Participants rated their level of collaboration using a three-item scale adapted from Kahn and Mentzer (1998) to fit this specific experimental context. The items were "I worked closely on tasks with my partner," "I collaborated with my partner of task assignments," and "I worked jointly with my partner on tasks." All items were measured on a 5-point Likert scale ranging from 1= *strongly disagree* to 5 = *strongly agree*.

Study 3 Data Analysis

I used path analysis within Mplus 8 (Muthén & Muthén, 2010) to test my hypotheses. To test the effects of non-role intrusions on both engagement and collaboration, I compared participant responses in the non-role intrusion condition versus the control condition. This involved creating an independent variable coded as "1" for all observations in the non-role condition and a "0" for all observations in the control condition. Similarly, to test the effects of in-role intrusions on both engagement and collaboration, I compared participant responses in the in-role intrusion condition versus the control condition. This involved creating an independent variable coded as "1" for all observations in the non-role condition and a "0" for all observations in the control condition.

CHAPTER 5

RESULTS

Study 1 Content Validation

To validate my non-role and in-role items, I utilized the Hinkey & Tracey (1999) content validation procedure. Participants in the non-role intrusions condition were asked to rate the correspondence of the non-role and in-role items to the non-role intrusions definition. Participants in the in-role intrusions condition were asked to rate the correspondence of the in-role and non-role items to the in-role intrusions definition. I then tested whether the items for a given type of intrusion had (1) appropriately high mean levels of correspondence to their own definition and (2) higher mean levels of correspondence than the items for the other intrusion construct.

The mean level of definitional correspondence between the non-role intrusions items and their definition was 6.36 out of 7. The mean level of definitional correspondence between the in-role items and their definition was 6.33 out of 7. These levels compare favorably to other uses of this technique (e.g., Colquitt, Baer, Long, & Halvorsen-Ganepola, 2014; Gardner, 2005; Hinkin & Tracey, 1999). I then used a repeated-measures ANOVA to test whether the items for a given definition had a higher definitional correspondence to their definition than did the other items (Hinkin & Tracey, 1999). This analysis shows, for example, whether the non-role intrusions items—when compared to the in-role items—had a significantly higher correspondence to the non-role intrusions definition. Results showed that the non-role intrusions items had significantly higher levels of correspondence to the definition of non-role intrusions than did the in-role intrusions items (Mean$_{diff}$ = 4.41, p < .05). The in-role intrusions items also had

significantly higher levels of correspondence to the definition of in-role intrusions than did the non-role intrusions items (Mean$_{diff}$ = 3.88, $p < .05$). This provided additional evidence of content valid items.

Scholars have also recommended that a confirmatory factor analysis be conducted on measures that have been subjected to the previously-outlined content validation (MacKenzie et al., 2011). Therefore, I supplemented my initial results with a confirmatory factor analysis of the two intrusions constructs. Utilizing MTurk, I recruited a new sample of 126 participants to quantitatively rate the extent to which they experienced each type of intrusion in their current work day. The average age of participants was 32 years ($SD = 8.60$); 33 percent of participants were female. Their average work experience was 11 years ($SD = 8.44$). Criteria for eligibility was that participants be employed full-time and have attended work on the day they completed the survey. These criteria ensured that they recently had the opportunity to be intruded upon. My hypothesized two-factor structure of intrusions exhibited good fit to the data: χ^2 (20) = 58.76, $p < .05$; comparative fit index (CFI) = .95; Tucker-Lewis index (TLI) = .93; standardized root mean square residual (SRMR) = .08. This two-factor structure fit the data better than an alternative model that included all of the intrusion items as indicators of one omnibus intrusion factor: χ^2 (21) = 312.01, $p < .05$; CFI = .61; TLI = .48; SRMR = .19; $\Delta \chi^2$ (1) = 253.25, $p < .001$. In sum, my analyses provide evidence that the two types of intrusions are content valid and empirically distinct.

Study 1 Descriptive Statistics

Means, standard deviations, correlations, and reliability coefficients of study variables are shown in Table 3.

Study 1 Confirmatory Factor Analysis

I conducted a multilevel confirmatory factor analysis to test overall model fit and to provide support for the distinctiveness of my constructs. I modeled non-role intrusions, in-role intrusions, collaboration, person-focused citizenship, and task-focused citizenship at the within-person level using item-level indicators of latent variables. Consistent with its operationalization (Rich et al., 2010), engagement was modeled at the within-person level by specifying three first-order latent variables (emotional engagement, cognitive engagement, and physical engagement) as indicators of a second-order daily engagement factor. My hypothesized model exhibited good fit to the data: χ^2 (191) = 687.47, $p < .05$; CFI = .93; TLI = .92; SRMR(within) = .06. My proposed model also fit the data better than an alternative model that modeled all of the intrusion items as indicators of one omnibus intrusion factor: χ^2 (196) = 1467.93, $p < .05$; CFI = .82; TLI = .79; SRMR(within) = .11.

Study 1 Hypothesis Testing

Hypothesis 1 predicted that non-role intrusions are negatively related to daily engagement, whereas Hypothesis 2 predicted a positive relationship between in-role intrusions and engagement. As shown in Figure 2, the relationship between non-role intrusions and engagement was negative and significant ($\gamma = -.08$). Therefore, Hypothesis 1 was supported. In support of Hypothesis 2, in-role intrusions were positively related to engagement ($\gamma = .15$). Hypothesis 3 predicted indirect effects of each type of intrusion on task-focused citizenship through engagement. As shown in Table 4, the confidence interval for the indirect effect of non-role intrusions on task-focused citizenship through engagement excluded zero (-.01; 95% CI [-.033, -.001]). Thus, Hypothesis 3a was

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supported. In support of Hypothesis 3b, the indirect effect of in-role intrusions on task-focused citizenship through engagement was also significant (.02; 95% CI [.002, .056]).

Hypotheses 4 and 5 predicted that non-role and in-role intrusions are positively related to daily collaboration. As shown in Figure 2, the relationship between non-role intrusions and collaboration was not significant (γ =-.08, p > .05). Thus, Hypothesis 4 was not supported. In support of Hypothesis 5, in-role intrusions (γ =.13) had a significant positive relationship with collaboration. Hypothesis 6 predicted that the two types of intrusions would have indirect effects on person-focused citizenship through collaboration. As shown in Table 4, the confidence interval for the indirect effect of non-role intrusions on person-focused citizenship through collaboration included zero (-.01; 95% CI [-.041, .006]), thus Hypothesis 6a was not supported. The positive indirect effect of in-role intrusions on person-focused citizenship through collaboration was significant, supporting Hypothesis 6b (.02; 95% CI [.002, .054]).

Study 2 Descriptive Statistics

Means, standard deviations, correlations, and reliability coefficients of study variables are shown in Table 5.

Study 2 Hypothesis Testing

I used path analysis in MPlus 8 (Muthén & Muthén, 2010) to test my hypotheses. To investigate the impact of non-role and in-role intrusions on both engagement and collaboration, two separate analyses were conducted. I first compared all days when participants were assigned to the non-role condition to all days when participants were assigned to the control condition. In this analysis, one independent variable was created with observations in the non-role condition coded as "1" and observations in the control

condition coded as "0." This independent variable was then used to gauge differences in participant engagement and collaboration via path analysis, allowing for a test of Hypothesis 1 and Hypothesis 4. Similarly, I also compared all days when participants were assigned to the in-role condition to all days when participants were assigned to the control condition. In this analysis, one independent variable was created with observations in the in-role condition coded as "1" and observations in the control condition coded as "0." This independent variable was then used to gauge differences in participant engagement and collaboration via path analysis, allowing for a test of Hypothesis 2 and Hypothesis 5.

In support of Hypothesis 1, non-role intrusions were negatively related to engagement (γ =-.13). In-role intrusions were positively related to engagement (γ =.10), providing support for Hypothesis 2. The relationship between non-role intrusions and collaboration was not significant (γ =-.07, p > .05). Thus, Hypothesis 4 was not supported. In-role intrusions were positively related to collaboration (γ =.12), supporting Hypothesis 5.

Study 3 Descriptive Statistics

Means, standard deviations, correlations, and reliability coefficients of study variables are shown in Table 6.

Study 3 Hypothesis Testing

I used path analysis in MPlus 8 (Muthén & Muthén, 2010) to test my hypotheses. To investigate the impact of non-role and in-role intrusions on both engagement and collaboration, two separate analyses were conducted. I first compared all participants assigned to the non-role condition to all participants assigned to the control condition. In

this analysis, one independent variable was created with participants in the non-role condition coded as "1" and participants in the control condition coded as "0." This independent variable was then used to gauge differences in participant engagement and collaboration via path analysis, allowing for a test of Hypothesis 1 and Hypothesis 4. Similarly, I also compared all participants assigned to the in-role condition to all participants assigned to the control condition. In this analysis, one independent variable was created with participants in the in-role condition coded as "1" and participants in the control condition coded as "0." This independent variable was then used to gauge differences in participant engagement and collaboration via path analysis, allowing for a test of Hypothesis 2 and Hypothesis 5.

In support of Hypothesis 1, non-role intrusions were negatively related to engagement ($\gamma = -.28$). In-role intrusions were positively related to engagement ($\gamma = .33$), providing support for Hypothesis 2. The relationship between non-role intrusions and collaboration was not significant ($\gamma = -.11$, $p > .05$). Thus, Hypothesis 4 was not supported. In-role intrusions were positively related to collaboration ($\gamma = 1.11$), supporting Hypothesis 5.

CHAPTER 6

DISCUSSION

In previous chapters I sought to expand upon our understanding of interruptions by taking a more nuanced look at workplace intrusions. To accomplish this, I first distinguished between intrusions that are work related—in-role—and intrusions that are not focused on work and are more social in nature—non-role. I next examined how these different types of intrusions impact the extent to which employees engage in their own work—engagement—and the extent to which they engage with others at work — collaboration. Finally, I investigated the indirect effects of intrusions on employees' task-focused and person-focused citizenship through engagement and collaboration. This work provides initial evidence that all intrusions are not created equal; that is, employees perceive different types of intrusions in different ways, which in turn impacts employee attitudes and behaviors.

Intrusions are a ubiquitous and often challenging aspect of organizational life. Although the literature has, understandably, often focused on the negative consequences of intrusions, my findings suggest this perspective is incomplete. Consistent with prior perspectives on intrusions (e.g., Jett & George, 2003; Kirmeyer, 1988; Lin et al., 2013; Perlow, 1999), I found that non-role intrusions were negatively related to engagement. Yet, my investigation also revealed that some intrusions can lead to beneficial outcomes for employees. Specifically, I found that in-role intrusions increased both engagement and collaboration. I did not find a significant relationship between non-role intrusions and collaboration, which suggests that not all work conversations facilitate future work-focused interaction. Taken together, these findings paint a more nuanced picture of

intrusions, suggesting that intrusions can be both beneficial and burdensome to employees.

Theoretical Contributions

My dissertation advances theory on intrusions by considering two distinct types of intrusions that employees are likely to encounter. Previous empirical work has not clearly differentiated various types of intrusions, leaving organizations with an incomplete picture of their dynamics. Extending previous research, I developed a more comprehensive model of the multifaceted nature of intrusions by defining and differentiating non-role and in-role intrusions. This distinction provides scholars with a richer understanding of intrusions and calls to question the utility of previous work that has treated all intrusions as equal. In short, my findings suggest that non-role intrusions are unique from in-role intrusions in ways that have important implications for employees.

Previous work has largely focused on the ways in which intrusions negatively impact employees. Scholars have placed a heavy emphasis on how intrusions may promote depletion, strain, time pressure, and overload (e.g., Freeman & Muraven, 2010; Kirmeyer, 1988; Perlow, 1999; Sonnentag et al., 2018). However, my investigation suggests that intrusions may have a more nuanced impact on employees. Investigating the role of both non-role and in-role intrusions on engagement and collaboration provided unique insight concerning how employees perceive and respond to different types of intrusions. Specifically, my findings show that intrusions differentially impact employees in ways that may have important implications for critical downstream outcomes. This multifaceted approach allowed me to test and extend Jett and George's (2003) proposal

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that intrusions can both benefit and burden employees. Building on these proposals both theoretically and empirically represents a contribution to the nascent research on intrusions.

The incomplete understanding of intrusions can also be attributed to scholars' focus on a relatively narrow set of outcomes, such as in-role performance (e.g., Couffe & Michael, 2017; Freeman & Muraven, 2010; Lin et al., 2013; Perlow, 1999). Although in-role performance is a critical outcome of workplace intrusions (Jett & George, 2003), an unfortunate side effect of this narrow focus is a failure to consider how intrusions affect other crucial aspects of employees' performance. Given the importance of discretionary behavior to organizational effectiveness (Borman & Motowidlo, 1997; Dalal, 2005; Rotundo & Sackett, 2002), this is potentially a critical oversight. As such, my investigation of task-and person-focused citizenship represents a step forward in developing our understanding of how employees respond to intrusions. Taken together with prior research addressing the effects of intrusions on in-role performance, my investigation provides a more nuanced and complete picture of the impact of intrusions on employee performance.

My within-person methodological approach to these dynamics in Study 1 and Study 2 provided insights that extant between-person investigations would not predict. Although intrusions are, by definition, "unexpected" and likely to vary on a daily basis (Jett & George, 2003; Kirmeyer, 1988), research has tended to take a between-person approach that potentially masks important dynamics. Whereas between-person empirical work on the impact of intrusions has assumed that being intruded upon will uniformly harm work outcomes, my daily-level investigation demonstrated that intrusions can also

lead to beneficial work outcomes. My results in Study 2 also provide evidence for the role of a specific non-role or in-role intrusion in creating deviations in employee engagement and collaboration. Thus, my methodology allowed for theoretical insights that were not apparent with prior methodological approaches.

Examining both non-role and in-role intrusions via an experiment in Study 3 provided additional support for my causal ordering. In this study I was again able to show that specific intrusion effects have a distinct and unique impact on engagement and collaboration. Utilizing a realistic work scenario in this experiment provided me with greater confidence that my findings are consistent with what would be found in organizations. In addition, my use of random assignment to intrusion condition provided additional evidence that non-role and in-role intrusions impact engagement and collaboration in the predicted manner.

Practical Implications

My results also have practical implications for organizations. Perhaps most importantly, my investigations reveal that intrusions can lead to employee attitudes and behaviors that organizations highly value. Previous research has largely encouraged organizations to limit intrusions as much as possible (for a review see Jett & George, 2003). In contrast, I demonstrated that certain intrusions can facilitate collaboration and increase engagement. Rather than attempting to eliminate all intrusions, this suggests that organizations may benefit from allowing the types of intrusions that are most likely to promote beneficial outcomes. For example, it may not be helpful for employees to frequently intrude on one another with small talk. However, intrusions that convey important task-related information or facilitate subsequent collaboration can be

beneficial.

Some organizations have recognized the value of unexpected employee interactions at work, leading them to implement open-door policies, reduce telecommuting, and design open-concept workspaces (Pentland, 2012; Swisher, 2013). Such changes may provide greater opportunities for intrusions that promote engagement and collaboration. By understanding the benefits associated with in-role intrusions, managers can work to model and encourage intrusions that benefit employees. Similarly, managers could establish norms regarding work-related intrusions. For example, a manager might communicate to employees that her door is always open for discussing new projects and ideas, but conversations about sports and pop culture are best saved for break time. Establishing norms around workplace intrusions might also help ensure that the benefits of intrusions are not undermined because they occur either too rarely or too frequently during the workday.

My investigation also has important implications for understanding the role of intrusions in promoting desired discretionary behavior in organizations. Given that employees are likely expected to maintain daily in-role performance regardless of intrusions received, it is possible that intrusions may not necessarily move the needle that much for in-role performance on a day to day basis. Conversely, the discretionary aspect of citizenship behavior makes the role of different types of intrusions more salient. This logic is consistent with other work which has suggested that "in stress situations, individuals assign priority to maintain task performance at the expense of discretionary behaviors" (Sonnentag & Frese, 2003). As such, organizations that are seeking to promote additional discretionary behavior might consider examining the type and

quantity of intrusions that employees are experiencing on a daily basis.

Although non-role intrusions did not indirectly benefit the employees in my studies through engagement and collaboration, non-role communication could potentially foster beneficial employee outcomes that were not addressed in my data. For example, research indicates that these informal interactions may contribute to developing interpersonal relationships at work, given that they can lead to increased emotional support, personal growth, and job satisfaction (e.g., Colbert, Bono, & Purvanova, 2016). Though non-role intrusions may not show an immediate benefit, they may provide longer term benefits through increased social exchange quality between work colleagues. Despite these benefits of non-role communication, my results suggest there is an appropriate time and place for these discussions.

Limitations and Future Research

Although there are many positive attributes of Study 1 (e.g., multi-wave, time and source separated survey design; unique sample of research scientists), my subjective measurement of intrusions received did not enable me to isolate unique intrusion events and link them specifically to employee engagement and collaboration. My sample also consisted of only research scientists rather than a broader sampling of employees in many different jobs. Study 2 provided an additional attempt at addressing these concerns. In Study 2 I was able to capture the direct link between specific in-role and non-role intrusions and both engagement and collaboration, with working individuals across a variety of industries. Future research should consider other methodological approaches that may allow scholars to capture unique intrusion events and subsequent employee behavior.

Study 2 provided additional support for the role of non-role and in-role intrusions in guiding employee engagement and collaboration. My use of random assignment of condition within-person allowed me to account for the role of between-person factors via design, and my sample of full-time employees across various industries provided additional evidence that my findings are not restricted to specific contexts. Moreover, my use of a daily critical incident approach to capture intrusions provided a more proximal link between intrusions and both engagement and collaboration. That said, my Study 2 design did not allow me to link specific task- and person-focused citizenship behaviors to employee engagement and collaboration. Future research might explore ways to link unique citizenship events to employee engagement and collaboration.

My within-person approach in Study 1 and Study 2 allowed me to account for the unique effects of non-role and in-role intrusions while controlling for potential between-person confounds. That said, there are likely boundary conditions that provide insights into how employees respond to different types of intrusions. For instance, the extent to which intrusions are commonplace in a work environment may guide interpretations of the disruptiveness of non-role intrusions. In addition, characteristics of the employee— such as conscientiousness, achievement motivation, or aggressiveness—may also play an important role in how they respond to specific intrusions. For instance, employees high in achievement motivation may experience an even greater reduction to engagement following a non-role intrusion. Moreover, existing relationship quality between employees also appears relevant, as intrusions may lead to higher levels of engagement and collaboration when the intruding party is someone the employee considers a friend. Conversely, the positive effects I hypothesize may be attenuated (and the negative effects

exacerbated) when the interrupted employee dislikes the interrupter. Future research is needed to fully unpack the various factors that may guide how employees respond to different types of intrusions.

My dissertation moves the conversation surrounding intrusions in a new direction by exploring the impact of intrusions on the extent to which employees engage in their own work and collaborate with others. However, there may be other mechanisms associated with intrusions that go beyond my model. For instance, intrusions may temporarily impact the attitude of the intruded-upon employee toward the intruder. Moreover, intrusions may increase an employee's sense of belongingness or perceptions of team-member exchange, which may shape a variety of employee outcomes. Intrusions may have a proximal impact on employee affect, providing an additional mechanism through which intrusions may impact subsequent employee behavior. Intrusions might also serve to benefit employees by reducing boredom, which may further impact satisfaction and well-being.

Though I focused my investigation on the indirect effect of intrusions on task- and person-focused citizenship, there are other relevant outcomes that might be affected by intrusions. For instance, in-role intrusions may indirectly promote in-role performance through increased engagement and collaboration, while non-role intrusions may disrupt employees' focus to such an extent that in-role performance is negatively impacted. Future research might explore the extent to which the gains in extra-role performance are offset (or complemented) by changes in in-role performance. It is also possible that different types of intrusions may have important relational consequences. Although non-role intrusions may temporarily disrupt employees' focus, these social interactions might

perform an important role as social exchange deepeners, leading to feelings of social

support which enhance employee well-being. Future research is needed to fully unpack

the impact of intrusions on these employee outcomes.

CHAPTER 7

CONCLUSION

Intrusions happen. Indeed, in modern organizations it is likely unrealistic to expect a workday free from intrusions. Given the negative characterization of intrusions in the academic and popular press, it is understandable that employees and organizations would strive to eliminate intrusions. Yet, it is likely not difficult for one to recall times when intrusions led to a positive outcome, such as an invigorating challenge or an opportunity to collaborate. My results indicate that intrusions can act as both benefits and burdens. In addition, my investigation shows that intrusions vary based on whether they are focused on work or non-work matters. This differentiation, in turn, has important implications for subsequent employee attitudes and behavior. From this perspective, scholars and organizations would be well-served to reconsider their position on the dynamics of intrusions.

TABLES

Table 1

Summary of Hypotheses

		Study 1	Study 2	Study 3
Hypothesis 1	Non-role intrusions are negatively related to engagement.	Supported	Supported	Supported
Hypothesis 2	In-role intrusions are positively related to engagement.	Supported	Supported	Supported
Hypothesis 3a	Non-role intrusions have a negative indirect effect on task-focused citizenship through engagement.	Supported	N/A	N/A
Hypothesis 3b	In-role intrusions have a positive indirect effect on task-focused citizenship through engagement.	Supported	N/A	N/A
Hypothesis 4	Non-role intrusions are positively related to collaboration.	Not Supported	Not Supported	Not Supported
Hypothesis 5	In-role intrusions are positively related to collaboration.	Supported	Supported	Supported
Hypothesis 6a	Non-role intrusions have a positive indirect effect on person-focused citizenship through collaboration.	Not Supported	N/A	N/A
Hypothesis 6b	In-role intrusions have a positive indirect effect on person-focused citizenship through collaboration.	Supported	N/A	N/A

Table 2

Study 1: Variance Components of Null Models for Daily Variables

Variable	Within-Person Variance (ρ^2)	Between-Person Variance (τ_{00})	Percentage of Total Variance Within-Person
Non-Role Intrusions	0.45	0.30	60%
In-Role Intrusions	0.70	0.72	49%
Engagement	0.49	0.56	47%
Collaboration	0.71	1.23	37%
Task-Focused Citizenship	0.82	1.26	39%
Person-Focused Citizenship	0.87	0.93	48%

Note. Percentage of variability within-person was computed as $\rho^2 / (\rho^2 + \tau_{00})$.

Table 3

Study 1: Means, Standard Deviations, and Correlations

	Variable	Mean	SD	1	2	3	4	5	6
1	Non-Role Intrusions	1.66	0.84	(.89)					
2	In-Role Intrusions	2.38	1.20	.05	(.85)				
3	Engagement	4.32	1.03	-.05	.15*	(.87)			
4	Collaboration	4.17	1.41	-.04	.14*	.45*	(.92)		
5	Task-Focused Citizenship	3.70	1.45	.09*	.04	.15*	.13*	(.94)	
6	Person-Focused Citizenship	3.96	1.34	.07	.01	.07	.15*	.50*	(.89)

Note. Level 1 n = 613. Level 2 n = 70. Within-person correlations are reported among all variables. Coefficient alpha is provided along the diagonal.
$^*p < .05$

Table 4

Study 1: Indirect Effects Analysis

Indirect Effects	
Non-Role Intrusions → Engagement → Task-Focused Citizenship	**-.01 (-.033, -.001)**
In-Role Intrusions → Engagement → Task-Focused Citizenship	**.02 (.002, .056)**
Non-Role Intrusions → Collaboration → Person-Focused Citizenship	-.01 (-.041, .006)
In-Role Intrusions → Collaboration → Person-Focused Citizenship	**.02 (.002, .054)**

Note. The 95% bias corrected confidence intervals for the indirect effects are based on 20,000 Monte Carlo bootstrap samples. Significant indirect effects are bolded.

Table 5

Study 2: Means, Standard Deviations, and Correlations

	Variable	Mean	SD	1	2	3	4
1	Non-Role Intrusions [a]	0.30	0.46	-			
2	In-Role Intrusions [b]	0.33	0.47	-	-		
3	Engagement	3.66	0.71	-.11*	.09*	(.93)	
4	Collaboration	3.61	1.00	-.04	.07*	.46*	(.96)

Note. Level 1 n = 906. Level 2 n = 139. Within-person correlations are reported among all variables. Coefficient alpha is provided along the diagonal.
[a] Non-role intrusions coded as 0 = Control condition, 1 = Non-role intrusions condition
[b] In-role intrusions coded as 0 = Control condition, 1 = In-role intrusions condition
* $p < .05$

Table 6

Study 3: Means, Standard Deviations, and Correlations

	Variable	Mean	SD	1	2	3	4
1	Non-Role Intrusions [a]	0.50	0.50	-			
2	In-Role Intrusions [b]	0.47	0.50	-	-		
3	Engagement	5.37	0.77	-.19*	.22*	(.85)	
4	Collaboration	1.97	1.09	-.05	.41*	.29*	(.90)

Note. $n = 201$. Coefficient alpha is provided along the diagonal.
[a] Non-role intrusions coded as 0 = Control condition, 1 = Non-role intrusions condition
[b] In-role intrusions coded as 0 = Control condition, 1 = In-role intrusions condition
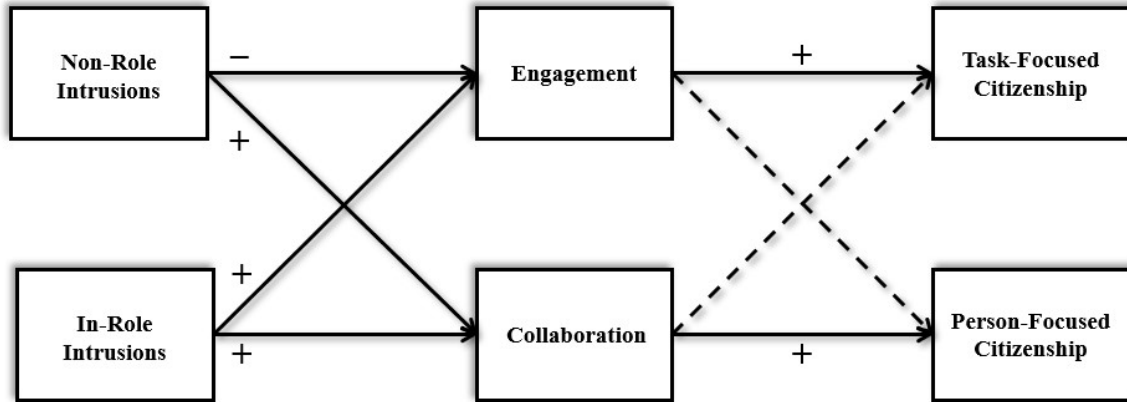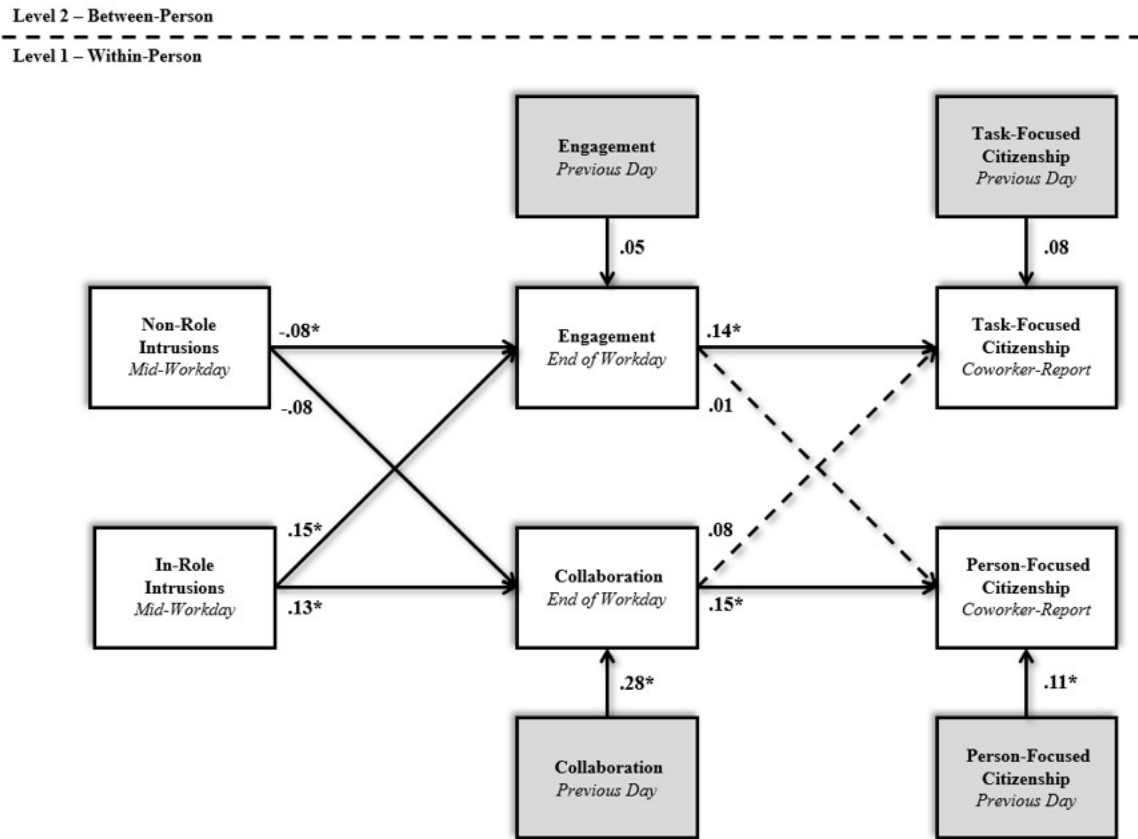
FIGURES

Figure 1

Theoretical Model

Figure 2

Study 1: Path Analysis Results

Note. Level 1 *n* = 613. Level 2 *n* = 70.
* *p* < .05

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APPENDIX A

STUDY 1 SURVEY ITEMS

Non-Role
Intrusions

TODAY, while I was focused on a work-related task, people at work…

1	2	3	4	5	6
Not at All	**A Little**	**Somewhat**	**A Moderate Amount**	**Quite a Bit**	**A Great deal**
Stopped by to socialize.					1 2 3 4 5 6
Reached out to chat about non-work things.					1 2 3 4 5 6
Engaged me in small talk.					1 2 3 4 5 6

In-Role
Intrusions

TODAY, while I was focused on a work-related task, people at work…

1	2	3	4	5	6
Not at All	**A Little**	**Somewhat**	**A Moderate Amount**	**Quite a Bit**	**A Great deal**
Asked me about the status of a task I was assigned.					1 2 3 4 5 6
Inquired about how I am progressing on one of my tasks.					1 2 3 4 5 6
Reached out to include me in a new project.					1 2 3 4 5 6
Requested that I take on a new work task.					1 2 3 4 5 6

Engagement

TODAY…

1	2	3	4	5	6
Not at All	**A Little**	**Somewhat**	**A Moderate Amount**	**Quite a Bit**	**A Great deal**
I exerted my full effort on the job.					1 2 3 4 5 6
I devoted a lot of energy to my job.					1 2 3 4 5 6
I was emotionally connected to my job.					1 2 3 4 5 6
I put my feelings into my job.					1 2 3 4 5 6
I gave my full attention to my job.					1 2 3 4 5 6
I concentrated completely on my job.					1 2 3 4 5 6

Collaboration

TODAY…

1	2	3	4	5	6
Not at All	A Little	Somewhat	A Moderate Amount	Quite a Bit	A Great deal

I worked closely on projects with my coworkers.	1 2 3 4 5 6
I collaborated with my coworkers on work assignments.	1 2 3 4 5 6
I worked jointly with other members of my organization on work tasks.	1 2 3 4 5 6

Task-Focused
Citizenship

TODAY, Employee…

1	2	3	4	5	6
Not at All	A Little	Somewhat	A Moderate Amount	Quite a Bit	A Great deal

Took on extra responsibilities in order to help coworkers when things got demanding at work.	1 2 3 4 5 6
Helped coworkers with difficult assignments, even when assistance was not directly requested.	1 2 3 4 5 6
Assisted coworkers with heavy work loads even though it was not part of the job.	1 2 3 4 5 6

Person-Focused
Citizenship

TODAY, Employee…

1	2	3	4	5	6
Not at All	A Little	Somewhat	A Moderate Amount	Quite a Bit	A Great deal

Went out of his/her way to be nice to others.	1 2 3 4 5 6
Took time to listen to coworkers' problems and worries.	1 2 3 4 5 6
Showed concern and courtesy toward coworkers.	1 2 3 4 5 6

APPENDIX B

STUDY 2 SURVEY ITEMS

In-Role Condition

Please think of the most recent instance when you were working on a task and somebody at work stopped by to discuss a work-related topic (e.g., assign new work, ask for a status update, discuss a current project, etc.)

Please think about your experiences following this discussion as you respond to the statements below.

Engagement:

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

I worked with intensity on my tasks.	1 2 3 4 5
I exerted my full effort on the tasks.	1 2 3 4 5
I devoted a lot of energy to my tasks.	1 2 3 4 5
I put my emotions into my tasks.	1 2 3 4 5
I was emotionally connected to my tasks.	1 2 3 4 5
I put my feelings into my tasks.	1 2 3 4 5
I gave my full attention to my tasks.	1 2 3 4 5
I concentrated completely on my tasks.	1 2 3 4 5
My mind was focused on my tasks.	1 2 3 4 5

Collaboration:

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

I worked closely on projects with my coworkers.	1 2 3 4 5
I collaborated with my coworkers on work assignments.	1 2 3 4 5
I worked jointly with other members of my organization on work tasks.	1 2 3 4 5

Non-Role Condition

Please think of the most recent instance when you were working on a task and somebody at work stopped by to discuss a non-work-related topic (e.g., have a personal conversation, make small talk, etc.)

Please think about your experiences following this discussion as you respond to the statements below.

Engagement:

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

I worked with intensity on my tasks.	1 2 3 4 5
I exerted my full effort on the tasks.	1 2 3 4 5
I devoted a lot of energy to my tasks.	1 2 3 4 5
I put my emotions into my tasks.	1 2 3 4 5
I was emotionally connected to my tasks.	1 2 3 4 5
I put my feelings into my tasks.	1 2 3 4 5
I gave my full attention to my tasks.	1 2 3 4 5
I concentrated completely on my tasks.	1 2 3 4 5
My mind was focused on my tasks.	1 2 3 4 5

Collaboration:

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

I worked closely on projects with my coworkers.	1 2 3 4 5
I collaborated with my coworkers on work assignments.	1 2 3 4 5
I worked jointly with other members of my organization on work tasks.	1 2 3 4 5

Control Condition

Please think about your experiences at work today as you respond to the statements below.

Engagement:

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

I worked with intensity on my tasks.	1 2 3 4 5
I exerted my full effort on the tasks.	1 2 3 4 5
I devoted a lot of energy to my tasks.	1 2 3 4 5
I put my emotions into my tasks.	1 2 3 4 5
I was emotionally connected to my tasks.	1 2 3 4 5
I put my feelings into my tasks.	1 2 3 4 5
I gave my full attention to my tasks.	1 2 3 4 5
I concentrated completely on my tasks.	1 2 3 4 5
My mind was focused on my tasks.	1 2 3 4 5

Collaboration:

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

I worked closely on projects with my coworkers.	1 2 3 4 5
I collaborated with my coworkers on work assignments.	1 2 3 4 5
I worked jointly with other members of my organization on work tasks.	1 2 3 4 5

APPENDIX C

STUDY 3 SURVEY ITEMS

Engagement:

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

I worked with intensity on my tasks.	1 2 3 4 5
I exerted my full effort on the tasks.	1 2 3 4 5
I devoted a lot of energy to my tasks.	1 2 3 4 5
I put my emotions into my tasks.	1 2 3 4 5
I was emotionally connected to my tasks.	1 2 3 4 5
I put my feelings into my tasks.	1 2 3 4 5
I gave my full attention to my tasks.	1 2 3 4 5
I concentrated completely on my tasks.	1 2 3 4 5
My mind was focused on my tasks.	1 2 3 4 5

Collaboration:

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

I worked closely on tasks with my partner.	1 2 3 4 5
I collaborated with my partner on task assignments.	1 2 3 4 5
I worked jointly with my partner on tasks.	1 2 3 4 5

APPENDIX D

IRB APPROVAL

ASU Knowledge Enterprise
Development

APPROVAL: EXPEDITED REVIEW

David Welsh
Management
-
davidwelsh@asu.edu

Dear David Welsh:

On 4/6/2016 the ASU IRB reviewed the following protocol:

Type of Review:	Initial Study
Title:	Work Interruptions and Multitasking
Investigator:	David Welsh
IRB ID:	STUDY00004215
Category of review:	(7)(b) Social science methods, (7)(a) Behavioral research
Funding:	None
Grant Title:	None
Grant ID:	None
Documents Reviewed:	• Approval.pdf, Category: Off-site authorizations (school permission, other IRB approvals, Tribal permission etc); • Recruitment_FieldStudy_Coworker.pdf, Category: Recruitment Materials; • Consent_FieldStudy_Coworker.pdf, Category: Consent Form; • HRP-503a 1.docx, Category: IRB Protocol; • Recruitment_FieldStudy_Employee.pdf, Category: Recruitment Materials; • Field_Survey.pdf, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); • Consent_FieldStudy_Employee.pdf, Category: Consent Form;

ASU Knowledge Enterprise Development

EXEMPTION GRANTED

Michael Baer
WPC: Management and Entreprenuership
480/727-4290
mikebaer@asu.edu

Dear Michael Baer:

On 8/19/2019 the ASU IRB reviewed the following protocol:

Type of Review:	Initial Study
Title:	Daily Work Intrusions
Investigator:	Michael Baer
IRB ID:	STUDY00010524
Funding:	None
Grant Title:	None
Grant ID:	None
Documents Reviewed:	• Survey Key (8-5-19).pdf, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); • HRP-503a.docx, Category: IRB Protocol; • Recruitment.pdf, Category: Recruitment Materials; • Consent Form.pdf, Category: Consent Form;

The IRB determined that the protocol is considered exempt pursuant to Federal Regulations 45CFR46 (2) Tests, surveys, interviews, or observation on 8/19/2019.

In conducting this protocol you are required to follow the requirements listed in the INVESTIGATOR MANUAL (HRP-103).

Sincerely,

IRB Administrator

ASU Knowledge Enterprise
Development

APPROVAL: MODIFICATION

Michael Baer
WPC: Management and Entreprenuership
480/727-4290
mikebaer@asu.edu

Dear Michael Baer:

On 11/13/2019 the ASU IRB reviewed the following protocol:

Type of Review:	Modification / Update
Title:	Daily Work Intrusions
Investigator:	Michael Baer
IRB ID:	STUDY00010524
Funding:	None
Grant Title:	None
Grant ID:	None
Documents Reviewed:	• Consent Form_Prolific.pdf, Category: Consent Form; • HRP-503a.docx, Category: IRB Protocol; • Recruitment_Prolific.pdf, Category: Recruitment Materials; • SurveyKey_Prolific.pdf, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions);

The IRB approved the modification.

When consent is appropriate, you must use final, watermarked versions available under the "Documents" tab in ERA-IRB.

In conducting this protocol you are required to follow the requirements listed in the INVESTIGATOR MANUAL (HRP-103).