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Times of Uncertainty: The Psychological and Behavioral Impact of Employment Uncertainty on Furloughed Workers and the Moderating Effect of Work Orientation

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by

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Dedicated to my parents.

ABSTRACT OF THE DISSERTATION

Times of Uncertainty: The Psychological and Behavioral Impact of Employment Uncertainty on Furloughed Workers and the Moderating Effect of Work Orientation

by

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Doctor of Philosophy in Organizational Behavior

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Professor J. Stuart Bunderson, Chair

Although furloughs have been used by organizations for some time, their use increased sharply during the COVID-19 pandemic. They differ from layoffs in the uncertainty they involve around the employment relationship. However, the phenomenon has received little attention from research on involuntary job loss, and the impact of the employment uncertainty it involves is largely unknown. Furthermore, the moderating factors that differentiate the impacts across employee populations are also unclear. In this dissertation I report a mixed-method field study examining the impact of employment uncertainty on furloughed workers and the moderating role by their work orientation. To guide the development of hypotheses, I conduct a qualitative analysis of semi-structured interviews with 28 furloughed employees. I then test my predictions with furloughed workers from various industries. Results suggest that employment uncertainty increases furloughed workers' negative emotions while decreasing their occupational commitment. The behavioral impacts of uncertainty include hedging and "live like working," mediated by occupational commitment. Furthermore, one's work orientation moderates the adverse impacts of uncertainty such that the effects are alleviated for someone with a stronger

sense of calling orientation but worsened for someone with a stronger sense of job orientation. The theoretical and practical implications of the findings are discussed.

Chapter 1: Motivation and Overview

Organizations are increasingly using furloughs as a way to deal with economic downturns that are perceived to be temporary in nature. A furlough is defined as "the placement of employees on leave with no pay of any kind for the period of the leave" (Halbesleben, Wheeler, & Paustian-Underdahl, 2013: 492). It is one type of involuntary job loss (involuntary separations initiated by the employer, Gowan, 2014), differing from a voluntary job loss ("an employee's decision to leave an organization." Shaw, Delery, Jenkins Jr, & Gupta, 1998: 511).

The word "furlough" stems from the Dutch word "verlof," meaning a permit given to members of armed forces to be exempt from service for a certain period (Oxford English Dictionary). It became relevant to unemployment when it was used to describe U.S. government workers' temporary loss of work without pay. The first furlough of Federal government workers happened in 1980, when Federal Trade Commission (FTC) was shut down and 1600 workers were furloughed for one day (Staats, 1981). Furloughs occurred several times during the Reagan and H.W. Bush administrations, but the length and scale became more substantial in 1995 due to the conflict between Clinton and the Republican Congress. The largest, longest, and most recent Federal government furlough happened from 2018 to 2019 under the Trump Administration, lasting 35 days and involving around 800,000 workers (Wamsley, 2019).

In the private sector, furloughs have been traditionally used by the manufacturing industry or seasonal businesses like retail as a way to save costs during times when companies have fewer personnel needs (Petrecca, 2009). For example, many auto assembly plants shut down and furlough their workers for a month at the end of the year (Faircloth, 2009). During the 2008 Great Recession, furloughs increased in popularity among larger corporations such as Intel,

Cisco, Toyota, and Barry-Wehmiller (Sullivan, 2009). According to the U.S. Bureau of Labor, the number of furloughed workers doubled in 2009 to two million. Before that year, it was relatively stable at around one million for over a decade (see Figure 1). The number then retreated to one million in 2014 and has remained stable since then. However, in early 2020 after the outbreak of the COVID-19 pandemic in the United States, there was a sharp increase of furloughs, jumping from 0.8 million in February to over 18 million in April – a twenty-two-fold increase within two months. At the same time, the number of layoffs ("a separation of an employee from an establishment that is initiated by the employer," U.S. Bureau of Labor Statistics, 2016) in April was merely 2 million, still a considerable increase of over 50% within two months but no match to the scale of increased furloughs. Among the 87 firms of S&P 500 that announced staff cut from March to June, sixty-five chose furloughs (Shumsky & Broughton, 2020).

Many of these companies' choice of furloughs over layoffs were based on the expectation that the economic downturn would be temporary. Therefore, they save the costs for severance pay, and after the economy recovers, they will save the costs of recruiting and training new employees (Petrecca, 2009). As Honeywell's previous CEO David Cote explained, "Managers typically overestimate the savings they will achieve (through layoffs) and fail to understand that even bad recessions usually end more quickly than people expect. We wanted to be ready for recovery as soon as it came, whether it was soft or V-shaped, and furloughs were one way of positioning us for any outcome" (Cote, 2013). What Cote referred to as "any outcome" includes the possibility that the economic difficulty lasts longer than expected. Even if that happens, companies will have the flexibility to turn furloughs into layoffs.

The discussion of different possibilities seems to indicate that furloughs would benefit organizations despite the economic uncertainties. To some extent it also benefits the employees because it provides the hope that they will get back to work. In the words of Bob Chapman (2013), the CEO of Barry Wehmiller, all company employees "shared the burden" of an economic downturn as they waited for better times.

At the same time, furloughs introduce uncertainties into the employment relationship, i.e., employment uncertainty, defined as the inability to predict the future of one's employment relationship (Milliken, 1987). The employment uncertainty associated with furloughs differentiates them from layoffs. Like romantic couples' saying, "let's break up" versus "let's take a break," the two are qualitatively different. Layoffs are like a breakup, ending a relationship and allowing the other party to start a new relationship. Furloughs are like "taking a break," creating uncertainties around the future status of the relationship, leaving the other party confused and unsure of whether and how to move forward from this relationship.

Understanding the impacts of employment uncertainty on furloughed workers is crucial theoretically and practically. Theoretically, although we know from uncertainty research (e.g., Elliott, 1966; McCormick, 2002; Quirk & Casco, 1994) that uncertainty associated with an aversive event (e.g., electric shock, physical illness, missing relatives) could independently cause psychological and behavioral impacts, we do not know what the impacts are in the context of furloughs. Identifying these impacts therefore fills in this theoretical gap. Practically, it will help managers better understand the implications of employment uncertainty when they decide to conduct furloughs, which suddenly became popular but remained novel to many. If I find that employment uncertainty indeed could cause harm to furloughed workers psychologically and behaviorally, managers and regulators should probably find ways to either reduce the uncertainty

or mitigate its impacts. Despite the importance of the topic, there is not much research on how employees deal with the employment uncertainty presented by furloughs.

The very few organizational studies on furloughs have focused on furloughs in government agencies. For example, Halbesleben et al. (2013) studied government employees taking one-day save-money furloughs after the 2008 Great Recession. Baranik, Cheung, Sinclair, and Lance (2019) studied longer furloughs (16 days) during the government shutdown in 2013. Taking the perspective of resource conservation, these studies found that furloughs could be resource-draining, causing emotional exhaustion, affecting performance after furloughs and mental health over longer terms. Building on these studies, I aim to further understand and explain these negative effects caused by furloughs, particularly from the perspective of the uncertainty that they induce.

The broader literature on involuntary job loss has mainly studied layoffs (Wanberg, 2012; Wanberg, Ali, & Csillag, 2020). Past research in this domain has generally focused on the impact (mostly emotional) of unemployment (e.g., Gowan, Riordan, & Gatewood, 1999; McKee-Ryan, Song, Wanberg, & Kinicki, 2005) and predictors of coping (mostly job searching) behaviors (Kanfer, Wanberg, & Kantrowitz, 2001; Prussia, Fugate, & Kinicki, 2001). Some comprehensive models have been developed around these topics (e.g., Latack, Kinicki, & Prussia, 1995), but discussions about furloughs along with the associated uncertainty are largely missing.

Furthermore, how uncertainty's impacts may vary across employee populations is unclear. In a review of a hundred years of research on voluntary turnover, Hom, Lee, Shaw, and Hausknecht (2017: 540) pointed out that future researchers should "think really big" to understand how theories may apply differently across different employee populations. According to my review of research on involuntary job loss and uncertainty, we also have little

understanding of how the impact of uncertainty may vary across different populations of furloughed workers.

I propose that people's work orientation could be such a factor that differentiates furloughed workers in terms of their psychological resources and thus how they respond to the impacts of employment uncertainty. Work orientation is defined as the way people relate themselves to their work (Wrzesniewski, McCauley, Rozin, & Schwartz, 1997). They could view their work as a job (focusing on monetary rewards), a career (focusing on career advancement), or a calling (focusing on the pleasure and social meanings). According to past research, one's work orientation could shape how one thinks about work situations by providing a rationale; it may also affect how one behaves by pointing out directions. For example, a sense of calling provided a "sensible narrative" for career choice of zookeepers (Bunderson & Thompson, 2009: 37). Work orientations could also affect workers' job crafting efforts by directing them to focus on different elements of their work (Wrzesniewski & Dutton, 2001). For furloughed workers, it is thus possible that work orientation could shape how people interpret and react to employment uncertainty.

In this dissertation, I aim to answer two research questions: 1) what are employment uncertainty's psychological and behavioral impacts on furloughed workers? 2) will work orientation moderate uncertainty's impacts on workers? I answer these questions by conducting a qualitative study and a multi-period quantitative study. Specifically, I interviewed 28 furloughed employees from 23 organizations and nine industries from mid-May to mid-June in order to understand the impact of furloughs on these employees and how they coped with their situations. Questions focused on the furlough process and the psychological and behavioral effects on the employees. Analysis of the qualitative data suggested that uncertainty may bring higher

intensities of negative emotions and lower occupational commitment. The occupational commitment could be positively associated with hedging behaviors (preparing for a permanent job loss) and negatively associated with "live like working" behaviors (living one's life during furlough as if one is still working). I further proposed work orientation as a moderator of uncertainty's impacts on negative emotions and occupational commitment. Particularly, people with a stronger sense of calling versus others who saw their work as a job or a career could be less susceptible to uncertainty's impacts[1]. Observations from my qualitative analysis were formalized into a theoretical model, which I then tested with a quantitative study of furloughed workers.

This dissertation contributes to the literature of involuntary job loss by deepening our understanding of furloughs, particularly the psychological and behavioral impacts of uncertainty they bring to the employment relationship. Moreover, it uncovers variations of uncertainty's impacts across employee populations by showing work orientations' role in shifting people's psychological and behavioral reactions. In terms of practical insights, my dissertation suggests that it is better practice for managers to lay off their employees instead of furloughing them if they do not expect to bring the employees back, because of the negative impacts of uncertainty. To alleviate these negative impacts, managers could try to reduce uncertainty by providing information and updates to their workers and keeping them in the loop while making important decisions. Given the moderating role of work orientations, it may also be worthwhile to identify

[1] Alternatively, it is possible that furloughed workers who see their work more as a calling may be more negatively affected by employment uncertainty because their stronger identification with their work could make them more likely to experience identity threat (Petriglieri, 2011). However, the qualitative and quantitative studies of the current research did not suggest this direction. It could be the case that the calling-oriented workers in the samples defined their calling broadly toward an occupation or an industry instead of narrowly toward a particular position or organization. In this way, the flexibility of switching to another job in the same domain made them less threatened by the possibility of losing their furloughed job.

calling-oriented workers during recruitment and to provide extra mental health support to job-oriented workers if furloughs must be implemented.

1.1 Overview

This dissertation will be organized as follows. In the second chapter, I provide a systematic review of the literature on involuntary job loss and research about uncertainties. Within this literature review, I summarize the key theoretical frameworks that involve the outcome variables of involuntary job loss. I assess how these frameworks may help understand the current phenomenon and identify their limitations in answering my research questions. I will also summarize research on uncertainties to gain insights into the impacts they will bring to furloughed employees.

In the third chapter, I develop a theory to fully understand the impact of employment uncertainty along with the moderating roles of work orientation. It will be derived from a qualitative study with furloughed workers from a variety of industries, coupled with my understanding of the literatures.

In the fourth chapter, I describe a multi-period survey study designed to provide insight into the hypotheses advanced in the third chapter regarding the process of coping with employment uncertainty during furloughs.

In the fifth chapter, I discuss the theoretical implications, practical implications, and limitations of my dissertation. The last chapter draws the conclusions.

Overall, this dissertation furthers our understanding of the uncertainties that furloughs introduce to the employment relationship. By studying how they affect employees psychologically and behaviorally and the moderating factors, it aims to inspire researchers and practitioners to better understand and conduct furloughs.

Chapter 2: Literature Review

In this section, I will review past research on the psychological and behavioral outcomes associated with 1) involuntary job loss and 2) uncertainty about an aversive event.

2.1 Psychological and Behavioral Consequences of Involuntary Job Loss

This Involuntary job losses happen when workers are removed from paid employment "through no fault of their own" (Gowan, 2014: 259). It differs from voluntary job losses (or most commonly called "voluntary turnover") in that the latter happens when employees voluntarily sever the employment relationship with their organizations (Marsh & Mannari, 1977) and thus move outside the control of organization authority (Holtom, Mitchell, Lee, & Eberly, 2008). Because having one or more alternative jobs is generally considered as an enabler of voluntary turnover (Ng, Sorensen, Eby, & Feldman, 2007; Steel, 2002), voluntary turnover tends to incur less harm on the employees but more on the organizations that may lose their high performers (Glebbeek & Bax, 2004). Due to these differences, voluntary turnover is studied by a different literature that has less relevance to this dissertation (Holtom et al., 2008; Hom et al., 2017).

The U.S. Bureau of Labor Statistics distinguishes three forms of involuntary job losses: Layoff/discharge, firing, and furlough (temporary layoff). Table 1 compares the definitions, implications for employment relationships, and the amount of past research across these three types of involuntary job losses. I counted the number of articles studying each type of involuntary job loss from three recently published meta-analyses on the topic of involuntary job loss (McKee-Ryan et al., 2005; Paul & Moser, 2009; Wanberg, Kanfer, Hamann, & Zhang, 2016). In addition, to understand the focus of more recent research on involuntary job loss, I

searched for articles published by management journals[2] from 2016 to 2021 with the Web of Science database, using keywords of "involuntary job loss", "layoff", "job displacement", "furloughed worker", "furloughed employee", "fired worker", "fired employee", and "unemployed" as well as combinations of these keywords. The search returned 175 results, 98 of which were empirical research papers that studied involuntary job losses.

As shown in Table 1, the majority (about 90% of papers in meta-analyses and 59% of papers from my literature search) of past research did not differentiate between different types of involuntary job losses but focused on the state of unemployment, which could be due to layoffs, firings, furloughs, or never being employed. For the remaining papers on involuntary job losses (about 10% of papers in meta-analyses and 40% of papers from literature search), almost all studied layoffs, and less than one percent of the papers from the meta-analyses or the literature search studied firing or furloughs. Despite the limited amount of research on furloughs, the literature on involuntary job losses could provide a foundation for understanding furloughs because furloughs like other types of involuntary job losses involve the loss of work-related benefits such as income, social contact, and time structure (Jahoda, 1981). Relating to my research questions, I focus on reviewing past research on the psychological and behavioral impacts of involuntary job losses on the focal individuals who lost their jobs.

2.1.1 Psychological Impacts

Losing a job involuntarily could cause psychological impacts such as anxiety (Marsh, 1938; Spera, Buhrfeind, & Pennebaker, 1994), distress (Gowan et al., 1999), depression (Hamilton, Hoffman, Broman, & Rauma, 1993; Winefield & Tiggemann, 1990), and deteriorating mental health (Dooley & Catalano, 1980; Dooley, Fielding, & Levi, 1996). A meta-

[2] Click here for the full list of journals.

analysis by Paul and Moser (2009) confirms the relationship between involuntary job loss and worse mental health (distress, depression, anxiety, psychosomatic symptoms, subjective well-being, and self-esteem). The results indicated a medium-sized standardized mean difference of mental health between employed individuals and those who lost their jobs involuntarily (*Cohen's d* = -.54; Cohen, 1992). An earlier meta-analysis conducted by McKee-Ryan, Song, Wanberg, and Kinicki (2005) on the same topic found a similar effect size of involuntary job loss on mental health (*Cohen's d* = -.57).

Explanations of psychological impacts. To explain such impacts by involuntary job loss on mental health, scholars have proposed a variety of theories, among which the most influential ones were perhaps Jahoda's (1982, 1987) latent deprivation model and Fryer's (1986) agency restriction model. According to Jahoda (1982), employment provides individuals with both manifest and latent benefits. The manifest benefits refer to the income that individuals get in return for their work, supporting their livelihood. The latent benefits refer to the psychological benefits that individuals get through employment, including time structure (routines and plans of time), social contact (with coworkers and supervisors), sharing common goals (with other employees in the organization), status (at work), and activity (doing things instead of idling). The latent deprivation model posits that although involuntary job loss deprives individuals of both manifest and latent benefits, it is the loss of latent benefits that explains the negative effects on mental health. In contrast, the agency restriction model acknowledges the same two types of benefits provided by employment but argues that it is not the loss of latent benefits but rather the manifest benefits (income) that explain the effects on mental health – a state of poverty would strongly corrode one's mental health (Fryer, 1995).

Both models received some extent of support from empirical research (Bartrum & Creed, 2006). In a quantitative study of 248 unemployed adults (job loss type unspecified), Creed and Macintyre (2001) directly compared the two models and found financial strain to be the most important predictor of mental health (explaining 16.81% of variance), followed by status (7.84%), time structure (5.30%), and collective purpose (1.96%). The effects of activity and social contact were non-significant. Therefore, the results suggest that the deprivation of both financial and psychological benefits associated with employment could contribute to the decrease in mental health.

In line with these arguments, the very few organizational studies that specifically focused on furloughs have taken the perspective of resource losses to explain furloughs' negative impact on mental health. In a quantitative study of 212 government employees (26% of which were furloughed for at least a day) during the 2013 U.S. federal government shutdown, Baranik, Cheung, Sinclair, and Lance (2019) found that the furlough status was related to higher perceived personal resource loss (i.e., "declines in individual characteristics that facilitate the stress-coping process during furlough") (Baranik et al., 2019: 383), which was related to decreased life satisfaction and increased burnout after they returned to work. Examples of the individual characteristics lost during furloughs included optimism, sense of control, and sense of purpose. In another quantitative study of 180 government employees who were furloughed for one day in a week to save budget, Halbesleben, Wheeler, and Paustian-Underdahl (2013) found that workers experienced higher exhaustion following a worker day. Though the resource losses were not measured, they were argued as the mediating mechanism explaining the effect.

Correlates and moderators of psychological impacts. Besides explaining the psychological impacts of involuntary job loss, another focus of past research on involuntary job

loss has been studying the factors that could affect the psychological well-being after job loss. These factors could be categorized into either the direct correlates of mental health after involuntary job loss or the moderators between involuntary job loss and mental health.

For the correlates of mental health after an involuntary job loss, McKee-Ryan et al. (2005: 58) in their review and meta-analysis categorized these factors into five types: work-role centrality (the importance of working to one's sense of self), coping resources (personal, social, financial resources along with time structure), cognitive appraisal (the extent one sees job loss as a stressor and attributes it to oneself), coping strategies (efforts to manage the demands posted by involuntary job loss), human capital ("productive potential of an individual's knowledge and actions, such as education and status), and demographics (such as gender). Among these variables, personal resources (core evaluations of oneself such as self-esteem and locus of control) had the strongest correlation with mental health (r = .55), followed by financial strain (r = -.45), stress appraisal (r = -.38), work-role centrality (r = -.34), and time structure (r = .31). Although the reasons behind these correlations were not explicitly explained by McKee-Ryan et al. (2005), they seem to overlap with the manifest and latent benefits as specified in Jahoda's (1982, 1987) latent deprivation model. This suggests that to some extent, the scale of involuntary job loss' psychological impact could depend on individuals' abilities to maintain some of the benefits of employment, so that they would be less deprived by the job loss and suffer less on mental health.

For moderators between involuntary job loss and mental health, McKee-Ryan et al. (2005) found that unemployment length and the school leaver status (leaving school and lost job before adulthood) acted as moderators. As unemployment lasts longer following the involuntary job loss, the effect on mental health becomes stronger. The effect was also stronger for school

leavers. The other meta-analysis by Paul and Moser (2009) also found that unemployment length served as a moderator. Gender and work types also served as moderators. The relationship between involuntary job loss and mental health was more pronounced for male than female workers and blue-collar than white-collar workers. Neither McKee-Ryan et al. (2005) or Paul and Moser (2009) provided an explanation of the moderating effects, but it is possible they may be attributed to differences in coping resources and coping strategies. For example, Donovan and Oddy (1982) in quantitative study found that school leavers could be more vulnerable to involuntary job losses because they are less mentally developed and have lower self-esteem than adults. Leana and Feldman (1991) in a quantitative study of laid-off workers found that women were more likely to seek social support after losing their jobs. In a longitudinal quantitative study of a group of unemployed (mostly laid-off) blue-collar workers, Sales (1995) found their families to experience worsening poverty over a two-year period, indicating blue collars' lack of financial resources could be one reason why they tend to be more susceptible to the negative impacts of involuntary job losses.

Another moderator that was studied by some scholars was procedural justice. Thibaut and Walker (1975) first theorized the construct of procedural justice. The original theorization of procedural justice involved process control – individuals' perceived involvement in the decision-making process, and decision control – their perceived influence over the outcome. Brockner et al. (1994) introduced the construct into the unemployment literature. They specified two elements that are particularly relevant in this context: advance notice and interactional justice. Advance notice refers to the period between the announcement and the effective date of unemployment. Interactional justice includes carefully explaining reasons behind the unemployment decision and respectfully treating the employees to be dismissed. Building on the

referent cognitions theory (Cropanzano & Folger, 1989; Folger, 1986), Brockner and colleagues suggested that procedural justice could moderate the negative emotional impact of involuntary job loss. According to the theory, individuals' psychological responses to an outcome depend jointly on their considerations of "would" and "should." Their resentment is greatest when they believe they *would* have better outcomes and decision makers did not follow procedures that *should* have been taken. Higher procedural justice indicates that employers did what they should have done in the unemployment process. It could thus reduce the emotional consequences of negative outcomes because recipients of such outcomes have fewer reasons to challenge the procedure and criticize the decision makers (Brockner & Wiesenfeld, 1996; Cropanzano & Folger, 1989). On the other hand, lower procedural justice may worsen the emotional consequences because they give the recipients more reasons to blame the procedure. In three quantitative studies involving three types of samples (workers who were recently laid off and still unemployed, workers who were laid off months ago and re-employed at the time of the study, workers who were scheduled to be laid off), Brockner et al. (1994) found support of the moderating effect, with higher procedural justice weakening the psychological impact of unemployment.

2.1.2 Behavioral Impacts

Past research has also examined the behavioral consequences of involuntary job loss. These behavioral consequences were captured by the construct of "coping" in the literature. Coping with involuntary job loss is defined as "what individuals do to protect themselves from the stress accompanying traumatic events such as job loss" (Leana & Ivancevich, 1987: 309).

Categorization of behavioral impacts (coping). To understand coping, earlier studies of involuntary job loss (e.g., Gatti, 1937; Zawadski & Lazarsfeld, 1935) took qualitative approaches

by interviewing people who lost their job involuntarily and categorizing their behavioral reactions to job loss based on the interview data. Eisenberg and Lazarsfeld (1938: 372) summarized the findings of these studies and categorized behavioral reactions into three groups: the unbroken, or those who would not give up because of job loss and continue to take action, going as far as organized efforts to "change the social order"; the broken, or those who lost hope, taking no action and "lying flat on their backs"; and the distressed, or those who could not get out of the depression related to job loss and may burst into anger and violence. The latter two categories of behavioral reactions were more about the failure to cope rather than efforts to manage stress associated with job loss.

Since these studies were mostly conducted in Europe during the 1930s, some of their findings were reflective of the historical context. At the time, Europe was in the midst of an economic depression, with authoritarian regimes and political extremism on the rise, most noticeably the rise of Nazis in Germany (Klapsis, 2014). This context may help to explain why violence and social revolutions were included in the set of behavioral reactions to involuntary job loss.

As the world proceeded into more peaceful times, research on coping with involuntary job loss also evolved. Based on a large-scale interview study of adults in the Chicago area, Pearlin and Schooler (1978: 2) categorized coping behaviors in general (not specific to involuntary job loss) into three types: problem-related coping, or "eliminating or modifying conditions giving rise to problems; meaning-related coping, or "controlling the meaning of experience in a manner that neutralizes its problematic character"; and emotion-related coping, or "keeping the emotional consequences of problems within manageable bounds." Folkman and Lazarus (1988) brought up a similar categorization of problem-focused versus emotion-focused

coping, with the former similarly defined as Pearlin and Schooler (1978) and the latter combining the meaning-related and emotion-related coping.

Kinicki and Latack (1990) focused on the construct of coping with involuntary job loss but challenged the clarity of distinction between problem- and emotion-focused coping. Instead, they proposed a categorization of control versus escape strategies. A control strategy was defined as "coping efforts that consist of actions and thoughts that are proactive or take-charge in nature." An escape strategy was defined as "actions and thoughts that suggest an escapist, avoidance mode" (Kinicki & Latack, 1990: 342). Within control strategies, they identified proactive search (job searching), nonwork organization (taking control of one's non-work life), and positive self-assessment (thinking positively about oneself). For escape strategies, they identified distancing from loss (distraction and detachment from the situation) and job devaluation (thinking of one's job as a less important element of life).

Antecedents of behavioral impacts. Building on this conceptualization of coping with job loss, Latack, Kinicki, and Prussia (1995) further added seeking social support (from spouse, family, friends, etc.) as a third type of coping strategies and constructed a theoretical model to explain the behavioral impacts of involuntary job losses. Taking a goal-setting-theory perspective, they proposed that the coping behaviors of involuntary job loss are jointly determined by coping goals (desire to cope with job loss) and coping resources (personal and environmental factors available to help cope with job loss). On the one hand, different goals would motivate people in different directions toward either taking control such as searching for a job or trying to escape such as mentally distancing the job loss. For example, if someone is strongly motivated to find another job, they may spend more time actively searching for a job. On the other hand, the accessibility of different coping resources could determine which

strategies one can take to cope with job loss. For example, individuals with higher education levels may engage in more active job searching because education provides them with the resource of competency in getting a new job (Gowan et al., 1999).

Although coping resources relate more to individual characteristics and environmental factors, coping goals, as proposed by Latack et al. (1995), were determined by individuals' discrepancy appraisal, i.e., the perceived gap between one's living standards before and after job loss. The discrepancy appraisal is usually perceived as losses in different aspects of life, such as economic, psychological, physiological, and social (Latack et al., 1995). The larger discrepancies someone perceives after job loss, the more motivated the person is to cope with such discrepancies.

Correlates and moderators of behavioral impacts. Latack et al.'s (1995) theoretical model suggests coping resources and coping goals as direct correlates of coping behaviors. Besides these variables, another correlating variable identified by past research is procedural justice. In a two-wave quantitative study (Bennett, Martin, Bies, & Brockner, 1995) of 50 employees to be laid off by a manufacturing facility, procedural justice was measured one month before the scheduled layoff, and coping behaviors were measured 18 months after the layoff. The study found that perceived procedural justice of the layoff process was negatively associated with control strategies over the period since layoff, such as job searching and relocating to find a job. The results were contrary to the authors' hypotheses, and a possible explanation provided by the authors was that "the very unfairness of the situation forces layoff victims to take the initiative and turn the job loss into an opportunity" (Bennett et al., 1995: 1038), which still does not clearly explain the mechanism. Based on Latack et al.'s (1995) model, a possibility is that perceived procedural (in)justice might have widened the discrepancy appraisal by worsening

individuals' perception of their layoff situation. This larger discrepancy appraisal would then motivate higher levels of coping goals and ultimately coping behaviors.

Latack et al. (1995) also proposed coping efficacy as a moderator between discrepancy appraisal and coping goals. Coping efficacy is defined as "the extent to which individuals believe they can successfully execute a particular coping strategy in order to reduce perceived discrepancies" (Latack et al., 1995: 322). They argued that people with different coping efficacies would react differently when they appraise high discrepancies following involuntary job losses. Individuals with lower coping efficacies would set goals favoring escape strategies because they do not believe they could successfully deal with the discrepancies; whereas those with higher coping efficacies would set goals favoring control strategies because they have the confidence of resolving the discrepancies. I have not seen this interaction effect tested by empirical studies since it was proposed in the review paper by Latack et al. (1995). I suspect one reason could be the ambiguity surrounding this construct. The theorization was a mixture of a trait (confidence) and the environment (to what extent it is controllable). The trait of confidence could be a part of the personal resources, which falls under another construct in the model – coping resources. Because of this lack of clarity and empirical evidence, it may not be safe to conclude coping efficacy as a moderator of the behavioral impacts.

Outcomes of coping behaviors. Past research on involuntary job losses examined two outcomes of the coping behaviors: mental health and reemployment success. For the effect of coping behaviors on mental health, past research has reached mixed findings. In Pearlin and Schooler's (1978) survey study of a general population sample after their qualitative study, none of the identified coping strategies (problem related, meaning related, and emotion related) was effective in relieving the occupation-related strains (in general, not limited to involuntary job

losses). Pearlin and Schooler (1978) suspected that this was because many work-related stressors could go beyond individual employees' control. After developing a typology and measure of coping behaviors related to involuntary job losses, Kinicki and Latack (1990) also quantitatively tested the relationship between different coping strategies and mental health in a cross-sectional study with 104 laid-off workers from the same manufacturing company. Their analysis also yielded null results for the correlation between coping behaviors and mental health. They speculated that this was because the two directions of the relationship between mental health and coping could happen at the same time – "the separate effects are difficult to unravel because they are occurring nearly simultaneously" (Kinicki & Latack, 1990: 357). Later, Gowan et al. (1999) in a cross-sectional study of 202 laid-off workers from an airline company found negative effects of both non-work organization and distancing from job loss on distress. No significant relationship was found between job searching and distress. In a longitudinal study of 363 unemployed workers (mixed types), Wanberg (1997) found no significant relationship between coping strategies measures at time one and mental health measured three months later. The paper pointed out one possibility of the null effect was the dynamic nature of coping behavior – people could have well changed their coping behaviors in three months between the two waves of survey. In the meta-analysis by McKee-Ryan et al. (2005), problem-focused coping was found positively related to mental health (r = .17, n (number of samples) = 3), emotion-focused coping was also positively correlated with mental health (r = .14, n = 7), and job searching was negatively correlated with mental health (r = -.11, n = 20). Yet they also noted as a caveat that the number of studies was small. The other two recently published meta-analyses on involuntary job loss (Paul & Moser, 2009; Wanberg et al., 2016) did not study coping behaviors. With the

mixed findings, it is probably still unsafe to say that coping behaviors could improve mental health of workers who experienced involuntary job losses.

For the effect of coping behaviors on reemployment success (i.e., finding a new job and become employed again after experiencing involuntary job losses), the relatively consistent finding is that job searching was associated with higher reemployment success. In a meta-analysis of the relationship between job searching and reemployment success, Kanfer, Wanberg, and Kantrowitz (2001) found a correlation of .20 between the two variables based on fourteen studies of laid-off workers. For other coping strategies, Gowan et al. (1999) conducted a two-wave survey study of 202 workers who were laid off by an airline company (wave 1: four months after layoff; wave 2: 10 months after layoff). The coping strategies were measured at wave 1, and reemployment success was measured at wave 2. Contrary to the meta-analysis finding, they did not find a significant relationship between job searching and reemployment. They also did not find a significant relationship between nonwork organization (another control strategy) and reemployment success. An escape strategy (distancing from job loss), however, was found positively correlated with reemployment success (r = .19). These findings were against their hypotheses, which expected significant and positive relationships between all three coping strategies and reemployment success. The authors suggested one interpretation of the results: the job searching strategies at wave 1 may not be effective because it was still too soon after the layoff – participants needed time to first cope with their mental health problems before they could search jobs effectively. Therefore, those who distanced themselves from job loss early on may have recovered their mental health more quickly and were more successful in getting reemployed. And yet this interpretation had no empirical evidence from the study, so the conclusions of the study should be taken with caution.

2.1.3 A Nomological Network of Psychological and Behavioral Impacts

Based on the discussion of past research on both psychological and behavioral impacts of involuntary job loss, I would propose a nomological network to create a general understanding of the foci of past research efforts. To achieve this goal, I would 1) understand the relationships between the two types of impacts as suggested by past research; and 2) compare the underlying mechanisms of psychological and behavioral impacts by involuntary job losses.

Relationship between mental health and coping behaviors. Past research suggests a bidirectional relationship between the psychological (mental health) and behavioral (coping) impacts of involuntary job losses. On the one hand, the diminished mental health associated with involuntary job losses creates the need for coping because we as humans tend to avoid aversive situations that cause us discomfort (Folkman & Lazarus, 1988; Latack et al., 1995). On the other hand, some coping behaviors may help improve one's mental health by either actively addressing the deprivation of benefits caused by involuntary job losses or escaping from the stressful situation temporarily (McKee-Ryan et al., 2005; Wanberg, 1997).

I have discussed coping behaviors' impact on mental health, but I have not seen the effect of mental health on coping studied by research on involuntary job loss, perhaps because it has already been well-validated in other domains of research such as stress coping (Folkman & Lazarus, 1988; Lazarus & Folkman, 1984) and emotion regulation (Gross, 1998, 2015).

The mediators of psychological and behavioral impacts. The logic behind the theories explaining the psychological and behavioral effects of involuntary job loss are essentially similar. Jahoda's (1982, 1987) latent deprivation model and Fryer's (1986) agency restriction model emphasized that it was the deprivation of benefits associated with employment that mediated the negative relationship between involuntary job loss and mental health. Latack and colleagues argued that it was the discrepancy appraisal that mediated the relationship between

involuntary job loss and coping behaviors. Although the theories used different labels, the core meanings of the mediators were the same: because of involuntary job loss, some elements of one's life that were brought by employment are missing – income (economic), time structure (psychological), social contact (social), shared common goals (psychological & social), status (social & psychological), and activity (physiological & social). It is the absence of these important elements of work that could harm one's mental health and drive the person to engage in coping behaviors. This absence was either labeled as deprivation or discrepancy appraisal, but the essence is the same, and as we can tell from the categorization of the examples, the missing elements that were proposed by different theories were also largely identical.

Based on these observations and earlier discussions about both psychological and behavioral impacts, I would propose a nomological network (shown in Figure 2) that summarizes existing research on this topic.

Relating to the current research context of furloughed workers, the mediating effect by the absence of work elements still applies – furloughed workers are losing income, time structure, social contact, shared common goals, activity, and to some extent their status at work. Therefore, I would assume that the same psychological and behavioral effects may occur on furloughed workers. However, since the vast majority of research reviewed in this section has focused on involuntary layoffs, I do not know whether and how the uncertainties surrounding the employment relationship could influence the psychological and behavioral effects on furloughed workers. As shown in Table 1, these uncertainties are the key characteristic that differentiate furloughs from other types of involuntary job losses. Unlike other types of involuntary job losses such as layoffs and firing that mark the termination of an employment relationship, furloughs put the relationship on pause, leaving the employees unsure about what they could expect for the

future with their organization and what they could do to prepare for it. To gather more insight on how employment uncertainty might affect furloughed workers psychologically and behaviorally, I will now review past research on how uncertainties affect people's reactions to an already aversive situation.

2.2 How Uncertainties May Affect Psychological and Behavioral Reactions to an Aversive State

Uncertainty is defined as "an individual's perceived inability to predict something accurately" (Milliken, 1987: 136). According to Wilson, Gilbert, and colleagues (Bar-Anan, Wilson, & Gilbert, 2009; Whitchurch, Wilson, & Gilbert, 2011; Wilson, Centerbar, Kermer, & Gilbert, 2005), the uncertain outcome in question can be perceived as either positive, neutral, or negative. Research suggests that uncertainty about positive outcomes may enhance positive emotions by promoting a sense of hope or curiosity, i.e., "the pleasures of uncertainty" (Kurtz, Wilson, & Gilbert, 2007: 980). For example, in one experiment, female college students were more attracted to male students who "liked them either a lot or an average amount" than male students who "liked them a lot" (Whitchurch et al., 2011: 172) because the former condition may cause the female student to think more about the male student.

Although research on positive uncertainty is interesting, the most salient prospect for a furloughed individual is the negative possibility of losing one's job. What, then, can we learn from research examining uncertainty about an aversive event? To understand how uncertainties could affect people's reactions to an already aversive situation, I draw from research on three topics: 1) shock experiments, which studied people's reactions to a possible electric shock in laboratories; 2) uncertainties about missing relatives, which studied impacts of missing family members on their close relatives; and 3) uncertainties in illness, which studied patients' reactions

to uncertainties about their severe diseases such as cancer. These streams of research from different domains represent uncertainties associated with three aversive states: electric shocks, loss of family members, and the prospect of death. The goal here is not to comprehensively review all three literatures but to learn what insights could be drawn to help us answer the current research questions.

2.2.1 Shock Experiments

This stream of research refers to a series of laboratory studies conducted in the 1960s to 1970s. They manipulated uncertainty by changing the predictabilities of getting electric shocks. It is worth noting that the studies may have some methodological limitations according to the standard of contemporary psychology, such as small sample size and lack of ecological validity. However, I would still like to discuss them because they are the early research efforts that relate to the type of uncertainty that I am studying and could offer some insights for my dissertation. With the limitations in mind, three types of insights could be drawn from these studies.

Psychological impacts. It is a rather consistent finding that the uncertainties associated with getting shocked could cause stress (Lazarus & Folkman, 1984). The results of shock experiments also seem to suggest that uncertainty is an independent variable causing the psychological impacts rather than a moderator of the psychological impacts of getting shocked. In an experiment with sixty undergraduate students, Elliott (1966) manipulated both the knowledge of when a shock would occur and how strong it would be. They measured participants' heart rates throughout the experiment and psychological stress (from 1 = “very relaxed” to 9 = “very tense”) 30 seconds after the shock (each participant only received one shock). They found that the only significant effect on both heart rate acceleration (from before the experiment until 30 seconds after the shock) and stress was the uncertainty around the shock

intensity. People who did not know the intensity of the shock experienced more heart rate acceleration and stress than those who knew. The actual intensity of the shock, however, did not significantly affect the two dependent variables. The uncertainty around when the shock would occur increased the heart rate acceleration during the waiting period before the shock. These results suggest the psychological effect of the uncertainty itself, independent of the actual intensity of the aversive stimuli (shock).

In another study with 24 undergraduates, Klemp and Rodin (1976) adopted a within-subject design. They manipulated uncertainty (by showing vs. not showing the participants a clock countdown) and the period of delay before the shocks (5 vs. 20 seconds). Each participant received 24 shocks; they self-reported distress level (1 = "not at all distressing" to 8 = "very distressing") during each preshock period and rated the strength of the shock from (1 = "weak" to 8 = "intense"). The study found that low uncertainty and shorter delays reduced distress prior to shocks but not the experienced intensity of the shock itself. These results again suggest uncertainty's psychological effect, independent of the intensity of the aversive stimuli.

Applying to the context of furloughed workers, these results suggest the uncertainty associated with the employment relationship may independently cause more stress and worse mental health for furloughed workers during the furlough period, regardless of the long-term outcome of the furlough (i.e., returning to the job vs. job loss).

Behavioral impacts. It is also a consistent finding from past research that people were motivated to seek information when they were uncertain about the shocks. In an experiment with 32 undergraduates, Jones, Bentler, and Petry (1966) assigned participants to two uncertainty reduction conditions. In condition 1, participants could push a button to request information about when a shock would occur. In condition 2, participants could request information about

both when a shock would occur and the intensity of the shocks. Each person received 12 shocks, which varied randomly in intensities and uncertainties around when they would occur. Results showed that people's requests for information were positively associated with uncertainty. In addition, people more frequently requested information about when the shocks would occur than the intensity of the shocks. The authors did not provide an explanation for this effect, but it probably connects to Elliott's (1966) finding that the uncertainty around when the shock occurred increased stress before the shock. Participants could thus feel more motivated to decrease this stress by seeking information about when shocks would occur.

Lanzetta and Driscoll (1966) reached similar findings in an experiment with 24 undergraduates. The authors also raised the point that although getting the information was non-instrumental in the sense that it could not change the outcome (frequency or intensity of shocks), people were motivated to get information. They argued that this motivation to search for information was a direct result of uncertainty rather than an effort to cope with the negative emotions associated with uncertainties, citing a lack of empirical evidence supporting the latter reasoning.

Relating to furloughed workers, these results suggest that the uncertainties they feel may independently increase information searching behaviors, despite the fact that any information they get may not necessarily affect the outcomes of furloughs. For example, a furloughed worker may talk with coworkers to see who also got furloughed and speculate how the organization made the decision. And yet knowing these issues may not necessarily change the instrumental outcomes of furlough. If the furlough ultimately evolves to a layoff, the workers could not change the outcome just because they had these pieces of information.

Moderators of impacts. Past research on shocks also points to two moderators of the psychological and behavioral impacts of uncertainty. First, the probability of the occurrence of the aversive state could affect the reactions to uncertainties such that the psychological effects were the strongest when the probability of shock was the lowest. In an experiment with 45 undergraduates, Epstein and Roupenian (1970) assigned participants to three conditions where they were told the likelihood of receiving a shock was 5%, 50%, or 95%. In fact, all participants ended up receiving a shock. People in the 5% group experienced the highest arousals during the anticipatory period before the shock, measured by heart rate and skin conductance. This indicates that they experienced the highest stress levels among the three groups. Epstein and Roupenian (1970: 26) speculated that the effect was because participants in the 5% group subjectively raised the perceived likelihood to 50%, with the thought of "at a chance of 1 in 20, it's pretty certain that I won't get a shock, but what if I do?" Therefore, they could neither "resign themselves to getting a shock nor dismiss the thought that they would receive one" (Epstein & Roupenian, 1970: 26). This result suggests a moderating effect of the probability of the aversive state on the effect of uncertainty because technically, the 5% and 95% groups had the same level of uncertainty, but the 5% group induced stronger psychological effects.

If this effect exists for the furloughed workers, it would indicate that they may experience the strongest psychological effects when the perceived probability of losing their job was the lowest. However, Lazarus and Folkman (1984) questioned the validity of this effect, citing contradictory findings from another study (Monat, Averill, & Lazarus, 1972), where people in the three groups did not differ significantly in stress levels, measured by heart rate, skin conductance, and self-reported stress. Therefore, I would be cautious in drawing any inferences about the moderating effect by the probability of the occurrence of the aversive state.

The other potential moderator suggested by past research is time – the longer people stay in the state of uncertainty, the less susceptible they become to its psychological impacts. An experiment (Monat et al., 1972) with 80 undergraduates adopted a 2 (50% vs. 100% probability of getting shocked) X 2 (knowing vs. not knowing when to get shocked) design. Each participant received three shocks except the condition with 50% probability of getting shocked and not knowing when to get shocked (they actually received no shock). Results showed that participants who knew that they were getting shocked but did not know when the shock would come reported high levels of stress during the anticipatory periods before each shock but then experienced a progressive decline of stress until the shock. The authors speculated that this decline was because participants engaged in more escape oriented coping as time progressed by diverting their attention away from the upcoming shock.

If this effect exists for furloughed workers, it would indicate that for those workers who believe strongly that they would ultimately lose their jobs but are just not sure when they would get the notification, as the furlough prolongs, they may adopt more escape coping such as seeking distractions and experience less stress.

However, it is worth noting that there exist several key differences between receiving an electric shock and being furloughed. First, the shocks happen in a rather short period, whereas furlough could drag much longer. So even some experiments manipulated uncertainty surrounding when a shock will arrive, the participants still know that they will come in a short period and certainly will be within the laboratory session. Yet for furloughed workers, they always have less knowledge about the length of furlough. It could be days, weeks, or months. Therefore, the furloughed workers could experience stronger uncertainty and thus be more severely impacted. Second, the shock experiments happened in laboratory settings, so the shocks

had less significant consequences on the participants other than some physical discomfort. In contrast, furloughs may profoundly affect workers' major source of income and their personal well-being. Therefore, employment uncertainty could have stronger impacts on furloughed workers. Third, participants of the shock experiments consented to take part in the study, yet the furloughs are mostly initiated by employers. The involuntary nature of furlough could also indicate that it may incur more serious outcomes on workers.

2.2.2 Uncertainty in Illness

The second stream of research that provides insights relevant to the uncertainty of furloughs studies the impact of uncertainties experienced by patients diagnosed with chronic and potentially fatal diseases such as cancer. The construct of uncertainty has been studied mostly by nursing research scholars since 1970s until today. They named the construct "uncertainty in illness", defined as "the inability to determine the meaning of illness-related events (that) occurs in situations where the decision-maker is unable to assign definite values to objects and events and/or is unable to accurately predict outcomes because sufficient cues are lacking" (Mishel, 1990: 256). Examples of the uncertainties experienced by cancer patients involve the progress of their disease, the effectiveness of treatments, and the future of their health (Mages & Mendelsohn, 1979; Mishel, 1981). The aversive situation associated with these uncertainties would be losses of body functions such as sight or speech, losses of a limb or a breast, or even the loss of one's life (Moos & Tsu, 1984). Drawing upon past research on these uncertainties, I derived three types of insights.

Psychological impacts. Like the shock experiments, research on illness uncertainties has consistently found the direct relationship between experienced uncertainties and worse mental health (e.g., distress, depression, anxiety) (Mast, 1995; McCormick, 2002). In a longitudinal

study of 60 patients who had a myocardial infarction (heart attack), Christman et al. (1988) measured experienced uncertainties and emotional distress right before hospital discharge, one week after discharge, and four weeks after discharge. They also measured coping behaviors, severity of the disease, education, marital status, occupation, and age. They found that uncertainty was the strongest and most consistent predictor of emotional distress, explaining 31% of the variance before discharge, 55% one week after discharge, and 40% four weeks after discharge. In a qualitative study, Hilton (1988) interviewed 16 women who were diagnosed with breast cancer. In the interviews, the patients expressed feeling anxious, upset, scared, and depressed because of the uncertainties.

These studies did not discuss in detail the reasoning behind these emotions, but the quotes from Hilton (1988) suggest both the fear of the worsening health and the frustration of not knowing what to do. Lazarus and Folkman (1984) in their stress appraisal theory labeled this effect as the "immobilizing effect" of uncertainties. Because uncertainties make disparate outcomes possible, people have to prepare for all these possibilities both cognitively and behaviorally. These preparations of different possibilities are often incompatible with each other, causing confusion and making it difficult to react to uncertainties. For example, Moos and Tsu (1984) pointed out that the development of new medical treatments for the previously incurable illnesses could make patients feel more uncertain and more stressful – they have to prepare for the worst (loss of body functions, body parts, or life) while maintaining the hope that they could be treated effectively.

Applying to the context of furloughed workers, these results suggest the uncertainty associated with the employment relationship would independently cause more distress and worse mental health for furloughed workers during the furlough period.

Appraisal and behavioral impacts. This stream of research has identified two types of behavioral responses by patients experiencing uncertainties. On the one hand, they may engage in emotion-focused coping by regulating their emotions. Examples of this coping include cognitive avoidance and wishful thinking (Mast, 1995). On the other hand, they may engage in problem-focused coping by trying to resolve the uncertainties. For example, they may actively search for information related to their disease and treatment (Hilton, 1988).

Building on the stress appraisal theory (Lazarus & Folkman, 1984), past nursing research on illness uncertainties has argued that the choice of coping behaviors would depend on the appraisals of the uncertainties. They could be seen as dangers because they associate with aversive states such as threatened health and life. They could also be seen as opportunities because there is still hope that the treatment is effective and the disease will be cured (Wright, Afari, & Zautra, 2009). However, regarding the linkage between appraisals and coping behaviors, past research has conflicting views.

In the early conceptualization of the uncertainty in illness theory, Mishel (1984, 1988) argued that danger appraisal would be associated with more problem-focused coping because patients would like to reduce the threat of danger by attempting to take control. Opportunity appraisal, however, would be associated with more emotion-focused coping because Mishel argued that patients who see uncertainties as opportunities are often those who fear certainties more than uncertainties. They could be in an illness situation with a downward trajectory, for example, at the late stage of fatal diseases such as cancer. They have little control over the disease's progress but could only resort to emotion-focused coping such as wishful thinking. This conceptualization of the theory has not received empirical support (Mast, 1995).

Mishel (1990) later reconceptualized the theory by linking opportunity appraisal to problem-focused coping and danger appraisal to emotion-focused coping. The underlying reasoning was that when uncertainties are appraised as opportunities, it indicates that the situation is still manageable, i.e., something could be done to reduce the uncertainties (Mishel & Sorenson, 1991). In contrast, when uncertainties are appraised as dangers, it suggests that the situation is hard to manage and thus the patients would engage in mostly emotion-focused coping. This reconceptualization received support from a study by Mishel and Sorenson (1991). In a survey of 131 women receiving treatment for gynecological cancer (cancer that starts in reproductive organs), danger appraisal mediated the relationship between experienced uncertainties and emotion-focused coping, whereas opportunity appraisal mediated the relationship between experienced uncertainties and problem-focused coping.

If this latter version of the theory holds for furloughed workers, it would indicate that the uncertainties around employment relationships felt by these workers could be interpreted both as danger and an opportunity, which leads to escape-oriented coping (similar to emotion-focused coping) and control-oriented coping (similar to problem-focused coping) respectively. However, I would take these conclusions with caution because 1) the theory and the reasoning behind it have changed fundamentally in a very short span of time, with the later version contradicting the earlier version; 2) the arguments were not very carefully developed or grounded on previous theories or qualitative analysis – particularly what opportunity appraisal means to patients remains unclear; and 3) there is not strong enough empirical support from a larger number of studies.

Regarding how the coping behaviors might reduce uncertainties and improve mental health, past research has not provided substantial evidence to support such claims (Mast, 1995;

Wright et al., 2009). In a quantitative study of myocardial infarction survivors, Christman et al. (1988) actually found positive relationships between emotion coping and emotional stress. The authors concluded it indicated the ineffectiveness of emotion coping, but since it was correlational analysis, the result could also reflect the increased emotion coping after feeling emotional stress. In Mishel and Sorenson's (1991) survey study of women with gynecologic cancer, emotion-focused coping was found to predict higher emotional stress, whereas problem-focused coping predicted lower emotional stress. However, this was also based on correlational analysis, so alternative explanations in the reverse causal direction are possible, and whether the coping behaviors could address uncertainties and their associated emotional consequences is unclear.

Moderators of appraisals. Past research has also suggested some moderators of the relationship between uncertainties and appraisals. The first moderator was time, i.e., how long someone has been in a state of uncertainty. Mishel (1990) cited the chaos theory and suggested theoretically that as the period of uncertainties extends further, people gradually shift their appraisals toward seeing uncertainties as opportunities by accepting that the uncertainties could be inherent with the disease providing hope that could take them out of illness. According to Mishel, this is how patients gradually adjust cognitively to the uncertain reality so that they could achieve harmony between their mindset and reality. Another explanation would be similar to the original theorization by Mishel (1984, 1988), which stated that as the illness progresses longer it may turn into more uncontrollable diseases, leaving the patient with nothing to do but to think of the uncertainties as their hope (Mages & Mendelsohn, 1979; Redeker, Allen, Jensen, & Mishel, 1992). To my knowledge, the moderating role of time has not been tested empirically.

The second moderator identified by past research is perceived control, i.e., the extent to which the patients believe that they have control over the future of their illnesses. Research generally suggests that when patients feel that they have more control they would be more likely to appraise uncertainties as opportunities because more control indicates that they could do more to reduce the uncertainties (McCormick, 2002). In the qualitative study of breast cancer patients, Hilton (1988) observed that patients' stronger belief in their control over the disease was associated with their appraising uncertainties less as dangers and more as opportunities. For example, some patients reappraised the uncertain situation with cancer as an opportunity for them to appreciate the preciousness of time, pursue higher quality of their life, and achieve more important life goals.

The third moderator was the strength of patients' faith (religious beliefs). A stronger religious belief system gives patients stronger sense of control, which makes them take more problem-focused and less emotion-focused coping behaviors. For example, in the same study of breast cancer patients, those with stronger faiths believed more that God had control of the outcome of their illnesses so that they would view the uncertainties less as dangers and more as opportunities.

If these moderators hold true for the furloughed workers, it suggests that the uncertainties associated with the employment relationship could be appraised as both an opportunity and danger by the workers, but workers who stay longer in furlough, who perceive higher control of the situation, and who have stronger faith may be more likely to see the uncertainties as an opportunity rather than a danger.

2.2.3 Uncertainty of Missing Relatives

The third stream of research that I draw from to understand the uncertainty of furloughs studies uncertainties caused by missing relatives. This could be due to war, forced separation, or other unknown reasons. It induces uncertainties because in many cases, the relatives of the missing person do not know if the person is still alive or if they will reunite with the family. The aversive state associated with this uncertainty is the permanent loss of a family member. The stream of research is relevant to this dissertation because 1) they both involve uncertainty regarding an aversive state; 2) they both incur severe consequences on someone's life, whether it is losing a family member or losing one's source of income; and 3) they could both last for a rather long period of time without the person knowing when could get a clear answer regarding their relatives or their job. Therefore, drawing upon past research on the uncertainty about missing relatives, I derive three types of insights.

Psychological impacts. It is a rather consistent finding that the uncertainties associated with missing relatives could hurt mental health of their family members, many times causing even more damage than definite losses (deaths of relatives). In a quantitative study of wives of Navy soldiers during the Vietnam War, Hunter (1979) found that compared to wives of soldiers who returned from active duty, wives of killed in action (KIA), and wives of prisoner of war (POW), wives of the missing-in-action (MIA) soldiers reported the worst physical and mental health four years after the POWs were released. For the MIA wives, the constant uncertainty they experienced was whether their husband was still alive, posting a strong threat to their family life and confusion about how to plan their life forward. Similarly, Powell, Butollo, and Hagl (2010) quantitatively compared two groups of Bosnian women whose husbands were either confirmed as having been killed or missing in action in the Bosnian War. Women in the latter group experienced higher grief and more severe depression than those in the former group. Even

worse, relatives of people who were forcibly disappeared (such as opposition leaders or student activists who were secretly detained and no information is disclosed to their families) were two times more likely to experience stress, anxiety, and post-traumatic disorder compared with families who lost a member due to accidents or illnesses (Quirk & Casco, 1994).

The reasoning behind such negative impacts on family members' mental health is similar to the "immobilizing effect" proposed by Lazarus and Folkman (1984). Because the family members do not know if the missing person is alive or dead, they have to live with "two opposing ideas in their minds at the same time" (Boss, 2002: 39). This paradoxical state prevents them from letting go and reaching cognitive closure, leading to prolonged grief, confusion, and anxiety (Heeke, Stammel, & Knaevelsrud, 2015).

Applying to the context of furloughed workers, these results would provide similar implications with the shock experiments and research on uncertainty in illness – the uncertainty associated with the employment relationship could negatively impact furloughed workers' mental health.

Behavioral impacts. Similar to research on uncertainty in illness, this stream of research has also identified emotion-focused coping and problem-focused coping as two types of behavioral reactions to uncertainties. A qualitative study of Sudan refugee children who were separated from their families by the civil war provides examples of both coping behaviors used by these children (Luster, Qin, Bates, Johnson, & Rana, 2009). In this case, the children fled outside Sudan and were uncertain whether their family members (mostly parents) in Sudan were still alive or not. The emotion-focused coping behaviors included avoiding thinking about their parents or seeking distractions such as by watching T.V. or bonding with other children who were in similar circumstances. The problem-focused coping included seeking information from

new refugees from their hometown and trying to contact their family members by writing letters to their hometown address. In addition, DeYoung and Buzzi (2003) in their qualitative study of parents of missing children found advocacy as another coping behavior. For example, seventy-five percent of parents in the sample engaged in some advocacy behaviors by joining groups that advocate for these families with missing children. The particular format of advocacy was not described in the paper. Similarly, in a qualitative study of wives of American MIA soldiers in Southeast Asia, McCubbin, Hunter, and Dahl (1975) found the wives participated in national and local efforts to help clarify their husbands' status.

Regarding the effectiveness of these coping behaviors, research indicates that emotion-focused coping was not effective in helping families recover emotionally, with a positive correlation (around .4) found between emotion-focused coping and negative emotions (depression, anxiety, and stress) in a quantitative study of families with missing persons in Pakistan (Basharat, Zubair, & Mujeeb, 2014). In contrast, problem-focused coping behaviors were found to be negatively associated with the same emotions (around -.4). However, these results were based on correlational analysis, so the causal relationships are unclear. It is possible that the results were because those who experienced more negative emotions needed more emotion-focused coping and less problem-focused coping.

Applying to the context of furloughed workers, these results would provide similar implications as the shock experiments and research on uncertainty in illness – the uncertainty associated with the employment relationship could induce the furloughed workers to engage in both emotion-focused (escape-oriented) and problem-focused (control-oriented) coping behaviors. Nevertheless, it is inconclusive whether either of the coping behaviors could help relieve the negative impacts of uncertainties on workers' mental health.

Moderators of psychological impacts. Research in this domain has suggested but not directly tested several moderators of the relationship between uncertainties and mental health. The first is tolerance of ambiguity, i.e., the ability to live with opposing possibilities and tolerate the unknowns (Tymula et al., 2012). Based on counseling experience with the families of the missing persons, Boss (2002) suggested that those with higher tolerance of ambiguity would be less affected emotionally by the missingness of their relatives, because they are more accustomed to living with the reality that their missing relative could be alive, could be dead, and they do not know which is the case.

Another moderator suggested by past research is the strength of religious beliefs. Boss (2002) suggested that the more spiritual people would feel less helpless when they cannot understand the unknowns around their relatives – they believe that "they will reunite with the missing person in Heaven" (Boss, 2002: 17). In the qualitative study of the Sudan children separated from their families, Luster et al. (2009) also found that religion helped some children shift their attention from what they lost to what they had. These children appreciated more about the fact that they were still alive after the War and the separation from their parents. Instead of pondering upon the past loss, they focused more on the future.

If these moderators hold true for furloughed workers, it would indicate that workers with higher tolerance of ambiguity and stronger religious beliefs would be less affectively impacted by the uncertainties associated with the employment relationship.

2.2.4 Combining Insights from Uncertainty Research

I mapped a nomological network (Figure 3) that integrates insights drawn from the three streams of uncertainty research. As shown in Figure 3, many relationships in this network are inconclusive, lacking either empirical evidence or theoretical basis. The only relationships that

were substantively theorized and supported widely across disciplines were the main effects of uncertainties on mental health and coping behaviors. The model provides important insights toward understanding uncertainties experienced by furloughed workers.

First, the three lines of uncertainty research all indicate that uncertainties could affect mental health and coping behaviors, independent of the effect by the aversive state it is associated with. This suggests for furloughed workers, uncertainties would be an independent variable creating the psychological and behavioral impacts rather than a moderator of the impacts by involuntary job loss. This broad finding by uncertainty research further underscores the importance of studying furloughs as a separate class of involuntary job losses because only furloughs involve such uncertainties about the employment relationship.

Second, the dependent variables studied by these lines of uncertainty research coincide with the dependent variables studied by research on involuntary job losses. For psychological impacts, both literatures focused on mental health; for behavioral impacts, both literatures focused on different coping behaviors. Although the labels may differ, they both categorized coping into control (problem-focused) and escape (emotion-focused) strategies.

Third, although without being conclusive, it brings up some moderating variables that have not been the focus of involuntary job loss research. For example, religiosity was recognized by both research on uncertainty in illness and uncertainty of missing relatives. It could potentially relieve the emotional impact of uncertainties and shift appraisals of uncertainties toward seeing them as opportunities.

2.3 A Summary of the Literatures and Potential Contributions of this Dissertation

Based on the review of past research on the psychological and behavioral impacts of involuntary job losses and uncertainty about an aversive event, I have learned that although furloughs as one type of involuntary job loss may generate some similar psychological and behavioral impacts to other types of involuntary job losses such as layoffs, the employment uncertainty that is unique to furloughs may independently impact furloughed workers. However, to understand these impacts and answer the current research questions, at least two issues remain unclear.

First, since furlough as a class of involuntary job loss has not received enough attention from past research, the impacts of employment uncertainty in this context are unclear. Although there exist a very small number of papers about furloughs, uncertainty was never the focus. This is unfortunate, given that this uncertainty about the unemployment relationship is the central element that differentiates furloughs from other types of involuntary job losses and that uncertainty could have independent psychological and behavioral impacts. Although I could draw some insights from the uncertainty research, the theories were not particularly developed for the job loss context, so it is unclear if the same effects would hold. For example, past research on uncertainties associated with an aversive event (shock, death, and missing relatives) all suggest information seeking as a type of control-oriented coping strategy. Yet I do not know if there exist some coping behaviors that are specific to the furlough situation – what do furloughed workers do to deal with uncertainties beyond searching for information?

Second, the understanding of the moderating variables is limited. Most of them were proposed or suggested to be moderators but not tested. Especially for the literature on uncertainties about an aversive state, none of the moderators were tested empirically. For the

involuntary job loss research, the understanding of the moderators remains fragmented. Some of the identified moderators (unemployment length and procedural justice) were tested separately by different groups of researchers, while other potential moderators (particularly the individual-related variables) were not tested. This will prevent us from answering the research question about how employment uncertainty's impacts may vary across different employee populations.

To address the first issue, I propose to understand the impacts of employment uncertainty on furloughed workers by first conducting a qualitative study with semi-structured interviews. The insights I draw from the interviews, combined with my understanding of the literatures reviewed, will form a theoretical model that will be tested in a quantitative study. To address the second issue, I propose to build the connection to a growing body of research on work orientations that studies how people relate to their work, seeing it either as a job (focusing on making money), a career (focusing on getting promoted), or a calling (focusing on the enjoyment and social meaning of the work) (Wrzesniewski et al., 1997). Research has found that one's work orientation, particularly a calling, plays a vital role in affecting various psychological and behavioral outcomes for employed workers by providing narratives and guiding behaviors (Thompson & Bunderson, 2019).

On the one hand, work orientation may shape how one thinks about work-related issues by providing a "sensible narrative" (Bunderson & Thompson, 2009: 37). Some zookeepers would attribute their going into the profession to their sense of calling as a zookeeper or a caregiver of animals, tracing their love of animals back to their childhood experience or religious beliefs. This narrative could also shape how workers cognitively process challenging situations and thus affect how they cope with the challenges. In a study of animal shelter workers, Schabram and Maitlis (2017) found that how someone framed the meaning of their work affected

how they made sense of challenging issues such as the poor management and working conditions, which then affected how they reacted to those situations, both emotionally and behaviorally. For example, for someone who saw their work as a way to contribute to animal welfare, they focused more on achieving this larger purpose and less on individual career success. Therefore, they tended to view challenges as opportunities instead of personal offenses, experienced less severe negative emotions, and engaged in more collaborative efforts to grow themselves.

On the other hand, work orientation can provide directions for work-related behaviors, guiding efforts toward aspects of work that coincide most with one's work orientation. One example from past research is how work orientation can shape job crafting efforts such that a particular work orientation leads someone to focus on certain aspects of work. As suggested by Wrzesniewski and Dutton (2001), someone with a strong job orientation may put emphasis on tasks that can get them the highest pay from work; someone with a strong career orientation may focus on interacting with powerful people, who may determine the probability of future promotions. Berg, Grant, and Johnson (2010) further specified different techniques people used to craft their job and leisure, guided by a sense of calling. For example, they may emphasize certain elements of their task that relate to their calling, take on additional tasks to pursue their calling, or participate in after-work hobbies to which they are called.

These findings have important implications for the current research. For furloughed workers, their work orientation may shape how they think and behave in reaction to employment uncertainty by providing both narratives and directions. Therefore, work orientation may act as a moderating variable that differentiates the psychological and behavioral impacts of employment uncertainty across employee populations. However, research on involuntary job losses has not

paid much attention to this fundamental variable that captures the relationship between an individual and their work. Although work centrality was identified as a correlate of mental health in the meta-analysis by McKee-Ryan et al. (2005), it is different from work orientation. The former refers to the importance of working regardless of the work content (Hirschfeld & Feild, 2000), whereas the latter is specific to someone's attitude toward a certain type of work (Day & Bedeian, 1991). Given the importance of work orientation for employed workers, it merits investigations to understand its impact on the jobless. Yet due to a lack of previous research on the topic, I am unclear about how it might affect furloughed workers.

2.3.1 Potential Contributions of This Dissertation

By studying the psychological and behavioral impacts of employment uncertainty on furloughed workers and the moderating role of work orientation, this dissertation contributes to research on involuntary job losses in at least two ways. First, it is one of the first organizational studies to focus on furloughs and more importantly, the employment uncertainty that sets furloughs apart from other types of involuntary job losses. Through a combination of inductive qualitative study and a deductive quantitative study, this research aims to directly examine and test the impact of employment uncertainty that results from furloughs.

Second, this dissertation will uncover variations in the impact of uncertainty across employee populations by studying the moderating roles of work orientation. This study therefore promises to bridge research on involuntary job loss and furloughs with research on work orientations. In this study, I explicitly examined work orientations during interviews and looked for systematic differences across furloughed workers with different work orientations. The observations and conclusions that I drew therefore contribute to research on work orientations or

work meaningfulness by uncovering the role of work orientations for employees who lost their jobs (furloughed in the current research context).

Chapter 3: Qualitative Study and Theory Building

In this section, I aim to develop theory and hypotheses to advance our understanding of the psychological and behavioral impacts of employment uncertainty on furloughed workers as well as the potential moderating effects by work orientation. The theory building will draw upon my understanding of the literatures reviewed in the previous section as well as insights gained from a qualitative study of furloughed workers. I will first describe the methods and analytic procedures employed in my study, and will then present my findings, discuss how those findings relate to and extend prior literature, and propose testable hypotheses that emerged from my analysis.

3.1 Data Collection

The data were collected from mid-May to mid-June 2020, a time period when furloughs in the US were at historic highs (around 15 million nationwide) because of the economic impact of the COVID-19 pandemic. As indicated by the US Bureau of Labor Statistics, the surge of furloughs in the US happened in April 2020, jumping from 1.8 million in March to over 18 million in April. This sharp increase happened after Congress passed the Coronavirus Aid, Relief and Economic Security Act (CARES Act[3]) on March 27, which provided an extra $600 Federal payment to the unemployed (including furloughed workers) on top of states' unemployment benefits. This act explains the steep rise of furloughs in March/April since it enabled many organizations to furlough employees without worrying as much about the impact of decreased employee income.

[3] https://www.congress.gov/bill/116th-congress/senate-bill/3548/text?q=product+actualizaci%C3%B3n

Table 2 shows some examples of large-scale furloughs in various sectors in the US, collected from different news sources. These examples indicate that large-scale furloughs started from the industries that were directly impacted by the pandemic, such as accommodation and food services and retail, and then moved rapidly to other industries such as entertainment, manufacturing, healthcare, information technology, and education.

COVID-19 furloughs provided an opportunity for answering the current research questions. Because the 2020 furloughs resulted from a global health crisis, its effects were not specific to certain types of work or specific industries and therefore findings should be more generally applicable. The diversity of jobs and organizations may also provide larger variances on individual and organizational factors, helping to unpack how they might affect the impact of uncertainties.

The pandemic context is also unique because it is unprecedented. For many furloughed workers, furlough was new to them – many had not even heard of the term "furlough" (Nova, 2020). For employers, furlough was also new due to lack of regulations to follow – the only official rules governing furloughs were the fact sheet #70 issued by the US Department of Labor in September 2019[4]. This fact sheet includes eleven commonly asked questions and answers about pay and hours worked issues for furloughed workers. For example, it states that furloughs "disqualify the employee from being paid on a salary basis only in the workweek when furlough occurs" and that "employees who perform part or all of their normal job duties during a furlough day" are considered "working" and thus could "require this time to be compensated." While this sheet provides some basic definitional information about furloughs, it leaves many questions unanswered such as when employers should notify their employees about furloughs, how long

[4] https://www.dol.gov/sites/dolgov/files/WHD/legacy/files/whdfs70.pdf

the furloughs can last, and what are the employers' responsibilities for the employees during furloughs. This may be because the fact sheet was issued in 2019 when no one was expecting the large-scale furloughs of 2020. The novelty and lack of clarity about furloughs contributes to the uncertainty faced by furloughed workers.

Despite the advantages, there might be potential concerns about specific characteristics of COVID-19 furloughs that might limit generalizability. For example, the COVID-19 pandemic brought the risk of getting infected if going back to work. The extra $600 Federal unemployment assistance (which in many cases tripled unemployment benefits) only lasted until the end of July and was subject to changes and lack of funding. Although these factors could generate other uncertainties associated with one's health and finances, they should not affect the value of this sample for our research questions because I focus on the impact of uncertainty surrounding the employment relationship, which should not be affected by contextual factors such as the coronavirus and the extra Federal government assistance.

I began the research with semi-structured exploratory interviews with furloughed workers. Because of the privacy restrictions that organizations have on disclosing the contact information of their furloughed workers, it is difficult, if not impossible, to recruit participants through their employers. Therefore, I took a snowball sampling approach (Goodman, 1961). I started by reaching out to furloughed workers in my personal network. To avoid sampling bias caused by my connections, I contacted organizers of online chatrooms for furloughed workers in different industries inviting their members to participate. For every participant that agreed to be interviewed, I requested that they approach one or two furloughed workers they knew. With these procedures, I recruited 28 interviewees from 23 organizations across nine industries. Table 3 lists the jobs and industries of the interviewees. To understand how uncertainty may affect

people of different work orientations differently, I asked interviewees to categorize themselves according to the job-career-calling classification. Out of the 28 interviewees, twelve saw their work as a calling, four as a career, and twelve as a job.

Appendix A provides a full list of prompting questions. In the interviews, to get an understanding of the furloughed workers' basic information, I asked them to briefly describe themselves, including their educational background, work experience, and their work content before furlough. To learn about the potential influences of organizational practices during the furlough process, I asked them to describe how they got the news of furloughs, including how and by whom was the message communicated, if they received any benefits from the organization during furloughs, and if their organization guaranteed that they would return to work. To learn about the emotions of the furloughed workers, I asked about their first reactions after hearing the news and if they felt any emotions at first and throughout the furlough period. To capture their behaviors, I asked how they spent a usual day during the furlough period and if there was anything they were planning to do but had not done yet. For the variable of their experienced uncertainty about the employment relationship, I did not ask them explicitly such as "how uncertain they felt" but instead asked general questions such as "what was your first thought/reaction to furlough" and more specific questions such as "do you have a guaranteed return to your job" and "when do you expect to go back to work." The importance of uncertainty emerged from interviews rather than being an a priori area of focus. These questions were guiding rather than constraining in each conversation. When unexpected and interesting topics were brought up by interviewees, I asked follow-up questions. The interviewees also talked about any issues that they thought were of relevance. Interviews generally lasted around 40 to 50 minutes. They were recorded and then transcribed.

3.2 Data Analysis

I analyzed the interview data using an inductive approach (Glaser & Strauss, 1967; Strauss & Corbin, 1990). Following the practice of past qualitative research (Harrison & Rouse, 2015; Pratt, Rockmann, & Kaufmann, 2006), I coded the data using a three-stage approach to construct theory.

Stage 1: Developing first-order concepts. I started the analysis with a round of open coding by reading through the transcripts and sorting them into emerging sets of topics. Following the procedure recommended by Miles and Huberman (1994), I used qualitative analysis software NVivo 12 (QSR International, 2018) as a tool to record provisional categories revealed in each interview at each time point. After codes were named and categories were made, I reviewed the data again to see if any of them fit the codes. When the revisited data did not fit well with codes, I revised or removed the codes. Such use of the constant comparative technique aims to increase the precision of coding (Strauss & Corbin, 1990; Thornberg & Charmaz, 2014). Once I reached theoretical saturation where additional cycles of coding did not yield new codes (Bowen, 2008), I moved on to the next stage.

Stage 2: Developing second-order concepts. During this stage, I conducted axial coding, understanding the first-order categories and labeling them in more abstract and theoretical terms (Harrison & Rouse, 2015; Locke, 2001). For example, a first-order coding statement involved interviewees' inability to predict how long the furlough would last. I used the category "length of furlough" to capture this element.

Stage 3: Aggregating theoretical dimensions. At this stage, I looked for dimensions underlying different categories in order to understand how they fit together coherently. For example, second-order themes of anxiety and fear were summarized as emotional impact. I brainstormed potential theoretical frameworks that could capture the relationships among these

dimensions based on what has been indicated by the data and existing literature. These possible models were again compared with data to examine their fit or misfit (Glaser & Strauss, 1967; Locke, 2001). Figure 4 summarizes the emergent structure of the data.

In the following sections, I summarize the picture that emerged from this analysis, and propose a set of emergent, testable hypotheses about the emotional and behavioral effects of furloughs and how work orientation may moderate these relationships.

3.3 Uncertainty about the Employment Relationship

Uncertainty was the most prevalent and salient feeling expressed by the furloughed workers that I interviewed. All 28 interviewees mentioned experiencing some form of uncertainty. When describing these uncertainties, many talked about a general state of unknown, using the term "I don't know" (thirteen interviews), "not sure what's going on" (six interviews), or "I have no idea" (three interviews). Because the interviews were conducted in the context of the COVID-19 pandemic with a special large-scale Federal government unemployment assistance program, many interviewees expressed uncertainties surrounding the health risks of getting infected and the duration of the extra Federal assistance. I focused on issues that were more general to furloughs rather than on issues that may be specific to this particular sample. I therefore paid particular attention to uncertainties that were about the employment relationship. For example, some talked about having no guarantees about their job as a furloughed employee, using terms like "no guarantee" (four interviews) or "nothing is guaranteed" (two interviews). Some said "who knows" (nine interviews) while referring to the uncertainty about the employment relationship as something beyond their control.

Specifically, the uncertainty surrounding the employment relationship primarily revolved around the question of how long the furlough would last. Because many organizations did not

specify or could not guarantee an "end date" of their furloughs, workers had little idea about how long their furlough would last:

> It's kind of like no one has a definite date of when we will actually be back at work. [20Job][5]
> After about three weeks of this, I hope this does not go on all summer. [21Job]
> I guess we will see how long this goes. [4Calling]
> In the first couple of days, I was relieved with all the free time I had, but then I realized rather quickly that it was stupid to feel relief because I had no idea how long this was going to go on for. [16Career]

Related to the question about how long the furloughs may last, the furloughed workers also expressed concerns about how the furloughs were going to affect their employment relationship with the organization in the future. Because the employment relationship was on pause during furloughs, the furloughed workers did not know how the furloughs would end. The relationship would continue if their employer hit the "resume" button and called them back to work. It was also possible that the relationship would end permanently if their employer hit the "stop" button and turned the furlough into a layoff. The furloughed workers did not know which of the two possibilities would happen.

> I have no idea. Am I still gonna be employed if this furlough ends? [2Calling]
> Nothing is guaranteed. That's the deal of furlough. [7Calling]
> Is it just gonna end up being a layoff, or firing basically? [23Job]
> There's no guarantee that I would have the job again. That's really the uneasiness. [21Job]
> In the back of my mind, I have a tiny bit of concern that I might not actually have my job back. I don't know. … It's something that I have to be prepared for, because, you know, things are changing, and so it's like, well, that could be a possibility. [22Job]
> Will there be a place for me July 31? If they can function, you know, May, June, and July without me, are they gonna need my position when it comes to July 31? It's just all that unknown, that, I think is the challenge. [10Calling]
> I'm not super positive that I'm gonna get my job back. … I think I will be surprised if I don't go back. But I won't be shocked if I don't go back. [10Calling]

[5] I use the assigned ID along with the self-identified work orientation to denote sources of quotes.

Because of the uncertainties surrounding these two questions about when and whether they would return to their job, furloughed workers also experienced the uncertainty about what they could do about the situation. Like partners who are taking a break, furloughed workers do not know whether they should stay put and keep good faith about the relationship or they should walk away and move forward to seek new relationships. In the words of the interviewees, they "can't see the different sides" of furlough [17Job], so they were "not sure what the next best step is" [15Career] and felt that they "can't do anything" [24Job]. Some interviewees described their inner struggle in more detail:

> There are things you can't control and things you're not able to predict. … I was trying to figure out what the next best career plan was and what the next step would have been. I wasn't sure before I was furloughed, but I'm much less sure now [after I was furloughed]. If I get to a point where I don't have a new job by October and my company does offer me a job back, I would probably go back there. But between now and then, you know, I would have to take time over the next six months and maybe longer to figure out. [15Career]
>
> It [Furlough from an internship] added a degree of uncertainty to my summer plans. I didn't know exactly how to proceed, and I didn't know exactly when more definitive news would be coming. So it made it very difficult to plan, and try to make arrangements for the upcoming months. [8Calling]

These uncertainties surrounding the employment relationship experienced by the furloughed workers impacted them both psychologically and behaviorally. I will next discuss the psychological and behavioral impacts that emerged from the qualitative analysis.

3.4 Psychological Impacts of Uncertainty

Consistent with past research on uncertainty associated with an aversive event, the uncertainty about the employment relationship affected these furloughed workers psychologically. From the interviews, the psychological impacts could be both emotional and attitudinal.

3.4.1 Negative Emotions

Like uncertainties associated with other aversive states (e.g., electric shock, loss of relatives, loss of good health), the uncertainty about the employment relationship was discomforting to furloughed workers, inducing negative emotions of anxiety and fear.

Anxiety arose because workers were "worried about the unknown" [22Job], did not have enough information, and did not know whether they "should be doing something" [3Calling] or if "there was anything [they] could do about it" [15Career]. The emotion "took a toll" and "kind of sneak[ed] up on you" [23Job], as workers kept pondering upon the unknowns and "worrying about the future" [14Career] "on a daily basis" [10Calling].

At the same time, the unknowns could lead to fear. An interviewee explicitly used the term "fear of the unknown" to describe her first reaction to furlough [4Calling], others used words such as "scared" [26Job], and "nerve-racking" [23Job]. Particularly, what seemed most fear-inducing was the thought that they might lose their job:

> I think positions are going to be eliminated. Um, and that's kind of my fear. … I think that's the scary element of the [furlough]. What if I don't a job? … Um, so that that is, ah, that's real nerve racking that part. [23Job]
>
> I can't see. I mean, it's not like they signed anything that said, you are sure to have your job back on the 27th. So on that I mean that's the thing that you know that scares me the most. Because if it is July 27 you know, if that were guaranteed, I wouldn't really be worrying about it too much just since I have been able to maintain work otherwise. But, um, that's more what I'm worried about. It's just when that day comes, but is it gonna end up being a layoff, or ah, firing? [22Job]
>
> It [Getting the furlough notice] was a really scary moment of over there because, you know, um, it was so much unexpected that you will be furloughed from work. And it was just a really, really scary time. I didn't know what was going on. And more than that, I had to stay home all the time without knowing anything for certain when the lockdown was going to end, or when things would go back to normal, and when they would call me for work. So I felt sad, depressed, and scared at the same time. [26Job]

These findings indicate uncertainty's association with negative emotions. This relationship is similar to what has been suggested by research on uncertainties associated with aversive states. As a baseline hypothesis, I therefore propose:

> ***Hypothesis 1****: Furloughed workers' employment uncertainty is associated with a higher intensity of negative emotions.*

3.4.2 Occupational Commitment

Like what I have learned from the uncertainty research that uncertainty would prompt people to search for information to understand the situation they are in, the employment uncertainty motivated the furloughed workers to make sense of why their organization pushed the "pause" button on the employment relationship. The interviews showed that many of them attributed this to their work content. They started to question the importance and meaningfulness of their job – because it is not essential enough, their organization could easily freeze or even remove their position anytime the organization faces economic difficulties. Experiencing such devaluation of their work, some decreased their commitment to their occupation, feeling "not as excited to go back to work" [17Job]. For some, this could even be a wake up call to think about what they can and "really want" to do for work [15Career]. The following quotes demonstrate such processes of self-questioning, self-doubting, and reduced occupational commitment.

> I'm gonna definitely hold on to the job as much as possible, but it's not the most secure job because it's just recreation. ... I don't want to, like, dedicate my life to it or stay there forever. [18Job]
>
> I think it [furlough] would be an opportunity for me to get away from admin work. If admin work were the only work that I could find I would do admin work, but I have a lot of other skills. [23Job]
>
> Before [the furlough] it seemed like everything was critical and we were so busy and we had to get all of these things done and it was super important. And then now it doesn't seem as critical. My job is important, but it's not gonna make or break the company. … I don't think I can stay working for this company because I won't have a job, just from an industry perspective. … I think the industry that I'm in right now is one of the hardest hit. [14Career]

> The uncertainties make me rethink about everything I'm doing. Why I'm even bothering to do things that I do? They make me question so many things. … I don't see myself, you know, serving a customer at a restaurant in five years. That's not the life I want for myself. [26Job]

Based on these observations, I hypothesize:

> ***Hypothesis 2****: Furloughed workers' employment uncertainty is associated with lower occupational commitment.*

3.5 Moderating Factors

The interviews also showed that people varied in the extent to which their emotions and occupational commitment were affected by the uncertainty. The analysis pointed to the moderating role of their work orientation.

Work orientation refers to how people relate themselves to their work, either as a job, career, or calling. Since I asked interviewees to self-identify which work orientation they took for their work before furlough, I was able to compare the codes across these broad categories. Through the comparisons, I noticed a distinct pattern for those who identified their work as a calling ("the calling people")[6]. They appeared to be more resilient against the emotional impact of uncertainty. Their calling made them reappraise the current situations by thinking less about the possible loss of their job but focusing more on the positive side and being more future-oriented:

> I'm sad. And yeah, this [furlough] sucks. And no, I don't like it. But I can't change the situation. All I can do is change my reaction, my attitude, and my behavior towards the situation because I'm not going to change the fact that I'm unemployed. [6Calling]
>
> I guess there are always questions in the back of my head. So is there a specific reason why I've been furloughed? Is my role safe? All of those sorts of questions were going through my mind. In the long term, is my job secure? That was a little bit emotional, but I

[6] Although I use the term "calling people" here and asked interviewees to self-identify themselves to one of the three categories, I take the stance that people's identification to each category is a matter of degree rather than kind (Hall & Chandler, 2005; Wrzesniewski, McCauley, Rozin, & Schwartz, 1997). Therefore, what "calling people" means is not that someone only sees his or her work as a calling but rather, someone sees the work more as a calling than as a job or a career.

> overcame that pretty soon. I just wanted to see it as an opportunity for you [me] to do something good rather than feeling bad about it. [3Calling]
>
> I don't have a choice. I don't have a choice. I don't have the ability to go sit on and lay down in bed and just melt into it. What keeps me going into the counseling is my passion for it. What keeps me getting up every single day and not, you know, getting into a depression is that I don't have a choice. I have to keep getting up and moving on. [6Calling]

What the quotes uncovered is that calling could give furloughed workers the certainty that this is the occupation that they would pursue in spite of all the uncertainties that they may feel. So instead of pondering upon all the unknowns and feeling the emotional burdens, a sense of calling reminds them of what is unchanged and truly matters. The love of their work will not change; neither will the fit between the work and their skillset. They "just have to wade through the process" [11Calling]. It will only be a matter of time until they get back to work or get a new job presumably pursuing the same calling.

In contrast, the interviewees who saw their job more as a job or a career seemed to have indicated that they suffered more emotionally from the uncertainty:

> No one had any real answers on how long it would last. I didn't really know there was something I could do about it, so I couldn't do anything. I feel anxious constantly, and most of the time it is very prominent. I just feel very uneasy and unsettled all the time when I think about the whole situation. [16Career]
>
> I was kind of feeling like a little hopeless because all I had been doing was working the whole year. I think me and all my coworkers, we kind of had that feeling of like, nervousness and a little bit of hopelessness because this has never happened before. You know, stuff like that emotion of anxiety. [18Job]
>
> I was very worried. I don't know, when you look at the sales of where we're at, the money that we're bringing in and the cash that we have on the books, I don't know how they're gonna sustain this. Even with the furlough, it's, it's, it's … So I'm a little nervous. [14Career]

Comparing across the calling people and the job or career people, it seems that their different levels of negative emotions were not because the calling people were not experiencing the negative emotions whereas the job or career people experienced them. Instead, they all seemed to have experienced the negative emotions at first, but the calling people were able to

somehow get through the emotions and feel lower intensities of emotions. Underlying this resilience was probably the distinct narratives calling provided to the furloughed workers, like what religiosity could do to the breast cancer patients (Hilton, 1988) and the Sudanese children separated from their families (Boss, 2002), helping them interpret uncertainty less as a hopeless situation but more as an opportunity for growth. Combining these observations, I would hypothesize:

> ***Hypothesis 3a****: Furloughed workers' work orientation moderates the relationship between employment uncertainty and negative emotions. The more one is job or career oriented, the stronger is the positive relationship, whereas the more one is calling oriented, the weaker is the positive relationship.*

Similarly, the calling people's commitment toward their occupation seemed to be less subject to the influence of uncertainty. In the interviews, they expressed the sense that since they were called to do their kind of work, the calling was "something that was completely built in"; it was "incredibly strong" and "couldn't be stronger" [2Calling]. Therefore, although they were currently furloughed and experiencing the uncertainty of losing their job, their commitment to the occupation would not change. If they lost their job, they would just find another job in the same domain.

> It doesn't matter who it is [that I am working for]. I'm doing it [my work] for the same reason [my calling], no matter what the company is. [7Calling]
>
> The furlough situation hasn't changed the way I think about the work. … I am still excited to meet that same mission. I still expect to try to improve patient experience and help healthcare professionals provide really exceptional care. [8Calling]
>
> It [My calling] still gives me fulfilment, you know, a deeper desire to get back in the work and start toiling in the trenches. [11Calling]

This unchanged commitment despite uncertainties coincides with the core tenet of having a calling that one is destined to work in one's domain of work and not other types of work, because the work that one is called to specifically fits one's talent, interest, and mission (Calvin, 1574; Thompson & Bunderson, 2019).

In contrast, people who lowered their commitment to their occupation because of uncertainty were mostly job or career oriented. As shown in the following quotes, the uncertainty made them re-evaluate the importance or value of their work:

> It's just recreation. … I don't want to dedicate my life to it or stay there forever. [18Job]
> If I have a choice, I wouldn't go back to work. … All these casinos, it's just kind of mercenary, you know, it's kind of cutthroat. … There's a lot of selfishness. People get mad if somebody makes a lot of tips. [17Job]
> I'm not planning to stay long because it's not a lot of pay and it's a lot of work. Sometimes that's a lot of hours and walking around on my feet, doing like manual labor. And it's just minimum wage. [27Job]
> The uncertainties make me rethink about everything I'm doing. Why I'm even bothering to do things that I do? They make me question so many things. … I don't see myself, you know, serving a customer at a restaurant in five years. That's not the life I want for myself. [26Job]
> Before [the furlough] it seemed like everything was critical and we were so busy and we had to get all of these things done and it was super important. And then now it doesn't seem as critical. My job is important, but it's not gonna make or break the company. [14Career]

Comparisons between the quotes from the calling people and those from the job or career people indicate differences in people's attitudinal reactions to employment uncertainty. While the calling people were still excited about their mission and fulfilled by the work itself, the job or career people were questioning the importance, value, and even the righteousness of their work. With these second thoughts, their occupational commitment decreased more than the calling people after feeling the uncertainty. Underlying the difference might be the directions that calling provides in terms of one's occupation choice – one's calling is specific to a particular type of occupation or work content and is less subject to environmental changes like the employment uncertainty. Job or career orientations, in contrast, are less exclusive to certain occupations and thus do not offer that clear and consistent direction. Based on these observations, I therefore hypothesize:

***Hypothesis 3b**: Furloughed workers' work orientation moderates the relationship between employment uncertainty and occupational commitment. The more one is job or career oriented, the stronger is the negative relationship, whereas the more one is calling oriented, the weaker is the negative relationship.*

3.6 From Occupational Commitment to Behaviors

Furloughed workers' occupational commitment could have downstream effects on their behaviors. Analyses of the interviews showed that the lower commitment that resulted from the uncertainty was first associated with "hedging" behaviors.

3.6.1 Hedging

Hedging refers to preparations for the risks associated with the uncertainty. I borrowed the term from Finance, where hedging is commonly used as a strategy to mitigate investment risks by making companion investments such as buying derivatives and diversifying one's portfolio (Guay & Kothari, 2003; Telser, 1955). For furloughed workers, when they felt less committed to their occupation, they would no longer expect to continue staying in that same domain for long because as they learned from the furlough situation, their position was not important enough to be kept during an economic downturn. Instead, they may start thinking about switching to another occupation that could be of more importance and involves less uncertainty. Therefore in the short run, if the furlough turns to a layoff in the end, they could potentially have another job as a backup option. In the long run, if future economic conditions lead to another round of large-scale furloughs, they should also be less likely to be furloughed again.

The most common hedging behavior among the interviewees was looking for employment opportunities outside one's current domain. For example, a service employee of a restaurant [26Job] was looking for opportunities to help with research work in universities even at lower pay because that would increase her chance of getting a scholarship for higher education

and getting out of the service role. Similarly, a marketing director of a large corporation [14Career] was looking elsewhere for a potential new job because the industry she was in suffered great financial loss during the pandemic and she thought her job "doesn't seem critical". She was considering entering an industry that is more stable and resilient in the current economic environment, such as e-commerce and consumer goods. Some other furloughed workers did not have a specific industry in mind but "kept an eye on" [25Job] other fields that could offer more stability and coincide with one's interest. As put by a marketing staff of a hotel group, "the uncertainty is more just like figuring out what I really want. What are the jobs that are in the fields that I really want to get into right now?" [15Career].

Often coupled with looking for jobs outside one's current domain was furloughed workers' efforts to expand their knowledge and skillsets in other domains as a way to make themselves more valuable and prepare themselves for future uncertainties. The hotel marketing staff I just discussed [15Career] called this effort to make herself "more marketable". She was taking online courses about programming, which was quite different from her current role but something that she saw as "more promising". Likewise, a furloughed lake resort lifeguard said furlough "taught me to take finding a career very seriously, especially seeing so many people laid off". She decided to go back to school for a graduate degree in physical therapy and started studying for the Graduate Record Examinations (GRE). Another furloughed hospital administrator was also exploring opportunities to get out of administrative work and become a full-time massage therapist, which she thought was more important and fulfilling. She used the furlough time to watch videos about massage and passed a board exam toward getting licensed, so as long as she gets enough observation hours, she would have the option to switch her occupation.

Integrating these arguments with the moderating effects by work orientation specified in hypothesis 3b, I would hypothesize:

> ***Hypothesis 4****: A furloughed worker's work orientation moderates the indirect relationship (through occupational commitment) between uncertainty and hedging behaviors. The more one is job or career oriented, the stronger is the positive relationship, whereas the more one is calling oriented, the weaker is the positive relationship.*

3.6.2 Live Like Working

As I have established in hypotheses 3b about the moderating role of work orientation, people may experience different levels of occupational commitment after feeling the uncertainty. For those whose commitment is less shattered by the uncertainty, they may engage a type of behavior that I call "live like working".

Live like working behaviors refer to living one's life during furlough as if one is still employed. From the interviews, I observed that the behaviors described by some workers sounded like what they would do while they were working. By engaging in such work-like behaviors during furloughs, the workers seemed to remind themselves that they still have their job and thus relieve some of the uncertainties. For example, some workers established a time structure or routine in their life during furlough, some were expanding knowledge or skills related to one's work domain, and some were volunteering to do things related to their work. For example, a furloughed fundraiser was making a plan for herself every day and doing research on fundraising work:

> I'm trying to keep a bit of routine in my life. So generally, having breakfast, doing some exercise, and then I make a plan for my day, revolving around practicing my skills of fundraising by watching videos, signing up for conferences and seminars, and also the research work I've got managed to get back to. [2Calling]

She also "approached a couple of organizations" and volunteered to help them with fundraising work. To help job seekers who may be interested in fundraising, she wanted to "push

out the message out to as many people as possible. I'm always willing to talk and support anyone who is looking into getting into the fundraising sector" [2Calling].

Another interviewee who was furloughed from the position of a casino's community relations coordinator was continuing, if not increasing her involvement with the community by putting more effort into her board position at a local community-building organization. In her words, "having that board position at our local community building, I've been able to kind of continue doing things that are important to me" [9Calling]. The furlough freed her up from the administrative aspect of her work ("sitting in front of my computer for eight hours") to be able to focus more on the "personal side" of her work by "personally volunteering" in her local community, "working directly with people", and "seeing the impact that we have on them" [9Calling].

For a furloughed copyeditor who was debating between whether she saw her work as a job or a calling, her time during furlough was even busier with her freelancing work on writing and copyediting books:

> I pretty much wake up and start working on my freelance work. … I still work into the evening and just try to relax for a couple of hours and then start over again the next day. I mean, I really haven't had any weekends. I still work every day. [23Job/Calling]

For these workers who mostly identified their work as a calling, the uncertainty had less impact on their occupational commitment. Because they still identified with the importance of their role and value they could create through their work, they were less inclined to find ways to get out of their current work domain but were more likely to stay put. In this way, although they were furloughed, they wanted to live like they were still working because that was the life they were used to living – being busy, productive, and working. That means they would take the initiative to structure their time as if they are spending workdays, take efforts to learn and grow as if their work still requires them to do so, and take voluntary responsibilities to make sure they

are still doing what they care about. They worked for the sake of working because to some extent, working is who they are and what defines them:

> I'm a working woman. I always work. [12Calling]
> I'm used to having a full day. I've had a lot of chores and a lot of jobs, and I still have a to-do list that isn't complete yet, so I don't feel totally and completely unproductive. … It's like I can't turn it off. I feel like I should be doing something, and I would say it bothers me not working. [10Calling]
> I'm trying to keep my brains in a fundraising mode. [2Calling]
> I am still doing pro bono work with my job [that I was furloughed from] that is probably all the same. … I'm kind of a workaholic. [7Calling]

Based on these observations, I argue that it was these workers' commitment to their occupation that kept them motivated and drove them to live like working despite the uncertainty about the employment relationship.

Integrating these arguments with the moderating effect by work orientation specified in hypothesis 3b, I would hypothesize:

> ***Hypothesis 5****: A furloughed worker's work orientation moderates the indirect relationship (through occupational commitment) between employment uncertainty and "live like working" behaviors. The more one is job or career oriented, the stronger is the negative relationship, whereas the more one is calling oriented, the weaker is the negative relationship.*

3.7 The Conceptual Model

The conceptual model that includes the key constructs and their relationships is presented in Figure 5. It could further our understanding of impacts of the psychological and behavioral impacts of employment uncertainty in the context of furloughs. Although the emotional impact it found is similar to what has been found by past research on involuntary job loss, the behavioral impacts are grounded in this context. It also took a step further to connect the psychological and behavioral impacts by showing the mediating role of occupational commitment. The study of occupational commitment is novel to research on involuntary job loss.

The model also extends our knowledge about the moderating variables that affect the impacting process by identifying work orientation as a moderator that could shape the process of reacting to the employment uncertainty. It would thus inspire new conversations by bridging the research on involuntary job loss with research on work orientations. By finding that one's work orientation matters in the process of reacting to the uncertainty, both psychologically and behaviorally, it calls for closer attention to moderators that differentiate across employee populations in studies of involuntary job losses. It also builds on the emerging literature of work orientations and work meaningfulness and shows that work orientation is a key construct not only for the working employees but also the non-working ones, in this case, the furloughed.

Chapter 4: Testing the Emergent Theory

In this section, I propose a quantitative study to test the hypotheses that arose from the theory section. I will discuss the sample, the scales to measure the variables, the strategy to analyze data, and the results.

4.1 Sample and Data

Hypotheses were tested using data obtained from a two-wave survey study. I used the online participant recruitment platform of Prolific Academic to recruit participants. Research has shown that this platform offers samples that are more geographically and racially diverse and has higher quality compared with other online platforms such as Amazon Mechanical Turk (Palan & Schitter, 2018; Peer, Brandimarte, Samat, & Acquisti, 2017). According to its website, Prolific Academic has a pool of over 70,000 participants worldwide. Researchers can choose to sample from a sub-population using over 100 screener questions (e.g., nationality, location, employment status, industry, etc.) that Prolific asked its participants. Since the COVID-19 pandemic, the website added a screener question asking its participants to self-disclose their employment status during the COVID-19 pandemic. One option they could choose from was "I was working full-time, but now my job has been suspended (e.g., unpaid leave or furloughed)." This offers an opportunity for the current research because, as already discussed, organizations are reluctant to disclose information about their furloughed employees, and snowball sampling is limited in the sample size and diversity it can get.

Taking advantage of the online platform, I decided to recruit the study sample through Prolific Academic. At the time I was still conducting interviews, but considering businesses were starting to open up and expecting the large-scale furloughs not to last long, I sent out the first survey on May 27th. Without a conceptual model yet at that point, I tried to include variables that

could be of importance according to past research, such as furloughed workers' emotions and coping strategies. The survey was available to U.S. participants who were furloughed at the time and had an approval rate (percentage of their past submissions of surveys being approved by researchers[7]) of over 90% on Prolific. Using the approval rate as a filtering tool was recommended by past researchers as an effective way to ensure data quality (Peer, Vosgerau, & Acquisti, 2014). Nine hundred and seventy-five participants qualified for the study, out of which 370 signed up for the first survey. Twenty-six of them failed an attention check question in the survey asking them to select a specific option (Oppenheimer, Meyvis, & Davidenko, 2009), and another forty-six indicated that they were actually not furloughed. Excluding these participants, I had 298 participants in Wave 1 (71.5% Caucasian; 55.4% female; average age = 30.69 years, *SD* = 11.44; average full-time employment length = 5.97 years, *SD* = 9.28). They were furloughed from different levels of jobs, with 45.0% of them furloughed from an entry-level position and 42.6% from a managerial position. They were from a variety of industries. Table 4 shows a breakdown of their industries.

As I started to learn about the furloughed workers as I conducted more interviews, I realized that a follow-up might be necessary because some key variables such as employment uncertainty and occupational commitment might be relevant but were not captured in Wave 1 survey. Therefore, I decided to send out another wave of survey to the same group of people on June 19th. The Wave 2 survey contained the same set of key variables as Wave 1 but added employment uncertainty and occupational commitment. Two hundred and five out of 298 participated in the Wave 2 survey. Excluding two who failed the attention check question and forty-nine who either went back to work or got a new job, I had 154 participants in the Wave 2

[7] The participants' approval rate on Prolific does not necessarily associate with their active level on Prolific – someone can do many tasks with a low approval rate or do a small number of tasks but with a high approval rate.

survey. Thirteen of them were filtered out because in the two quality control questions[8] (Meade & Craig, 2012), they self-identified that I should not use their data or they did not spend enough efforts in filling out the survey, leading to a final sample size of 141 (73.0% Caucasian; 61.7% female; average age = 31.95 years, *SD* = 11.98; average full-time employment length = 6.68 years, *SD* = 9.80). They were furloughed from different levels of jobs, with 41.8% of them furloughed from an entry-level position and 25.5% from a managerial position.

4.2 Measures

Appendix B provides the full scales for all measures and in which wave they were measured. Because some key variables (employment uncertainty and occupational commitment) were measured only in Wave 2, it made more sense to conduct analyses with Wave 2 data. Wave 1 provided measures of control variables (financial resources and perceived psychological contract breach) and demographics. Based on my review of the involuntary job loss literature, furlough as a type of involuntary job loss could potentially lead to loss of manifest benefits (income), which could impact their emotions and behaviors such as job searching, which is one key element of the hedging behavior. Therefore, in Wave 1 survey, I measured *financial resources* as a control variable. Furlough as a type of involuntary job loss may induce a sense of perceived psychological contract breach (the employee's perception that the organization has failed to fulfill its obligations; Robinson, 1996) which could heighten negative emotions and lower occupational commitment, I measured perceived *psychological contract breach* as another control variable.

[8] The two quality control questions include 1) In your honest opinion, should we use your data from this survey? (yes, maybe, no); 2) You will receive payment for this study no matter what, however, please tell us how much effort you put forth toward this study. (almost no, very little, some, quite a bit, a lot of). Participants who selected "no" or "maybe" for the first question and who selected "almost no," "very little," or "some" for the second question were excluded from the analyses. Keeping those participants would not change the conclusions.

Employment uncertainty. I measured employment uncertainty with a five-item scale (α = .78) adapted from Ashford, Lee, and Bobko (1989). Participants indicated how uncertain they felt toward several events, such as "Losing their job by being fired." They rated each item on the scale from 1 = *not at all* to 7 = *extremely*.

Negative emotions. Participants' negative emotions were measured with a 6-item scale (α = .93) from the PANAS (Watson, Clark, & Tellegen, 1988), including "upset", "distressed", "nervous", and "jittery" to capture anxiety and "scared" and "afraid" to capture fear. Participants indicated the extent to which they experienced the emotions during the period since they were furloughed from 1 = *not at all* to 7 = *extremely*.

Occupational commitment. Occupational commitment was measured with a 4-item measure (α = .73) adapted from the affective occupational commitment (having "a strong desire to remain in the occupation") scale by (Meyer, Allen, & Smith, 1993: 540). Although I also measured continuance (recognizing "high costs associated with leaving the occupation") and normative commitment ("a sense of obligation to remain"), these two dimensions were less relevant to the current context because the qualitative analysis did not show the uncertainty's impact on furloughed workers' thoughts about high costs of leaving or obligation to remain in the occupation. Instead, they indicated weaker desire to remain because the uncertainty made them question the importance and value of their work. Quotes such as "not as excited to go back to work" [17Job], "that's not the life I want" [26Job], and "I don't want to dedicate my life to it" [18Job] all indicate the relevance of affective commitment. Participants chose the extent to which they agreed with the items from 1 = *strongly disagree* to 7 = *strongly agree*. A sample item is "I am enthusiastic about the profession I was furloughed from."

Hedging. I focused on the job searching element of hedging behavior because it was the most salient behavior that represents hedging, I took the four-item (α = .95) job-searching behavior scale from Kinicki and Latack (1990). Participants rated on four items about how often they engaged job-searching-related behaviors during furlough from 1 = *almost never* to 7 = *always*. An example item is "I focus my time and energy on job search activities."

Live like working. Similarly, volunteering in the same domain was the most characteristic type of "live like working" behavior. It was measured with three items (α = .85) developed from the voluntary behaviors disclosed by interviewees. Participants indicated how often they engaged in certain voluntary behaviors during furlough from 1 = *almost never* to 7 = *always*. An example item is "engage in unpaid work related to the work I was doing before furlough."

Work orientation. Participants read three paragraphs describing three persons with work orientations of job, career, and calling (Wrzesniewski et al., 1997) and indicated how much they were like each person from 1 = *not at all like me* to 7 = *very much like me*.

Control variables. In Wave 1 survey, I measured *financial resources* by asking participants to select their range of annual income (Meuris & Leana, 2018). Also in Wave 1, I measured *perceived psychological contract breach* with five items adapted from Robinson and Morrison (2000). Participants chose the extent to which they agreed with the items from 1 = *strongly disagree* to 7 = *strongly agree*. A sample item is "So far my employer has done an excellent job of fulfilling its promises to me" (reversed).

Alternative moderators. According to my review of research on both involuntary job loss and uncertainty, perceived sense of control as a personality trait was proposed as a potential moderator differentiating people's responses to these adversities (e.g., Hilton, 1988; Latack et al.,

1995a). However, based on my review, neither the involuntary job loss nor the uncertainty literature conducted empirical tests of the moderating effects. Therefore, in Wave 1 survey, I measured *perceived sense of control* with a four-item scale by Lachman and Weaver (1998). Participants chose the extent to which they agreed with the items from 1 = *strongly disagree* to 7 = *strongly agree*. A sample item is "I can do just about anything that I really set my mind to." Relatedly, I measured *resilience* as a way to capture how well the workers are able to engage in self regulations to cope with the challenges presented by uncertainty. It was indicated by past research as a potential factor that differentiates people's responses to adversities or stress (e.g., Ong, Bergeman, Bisconti, & Wallace, 2006; Sutcliffe & Vogus, 2003). Therefore, in Wave 1 survey, I measured *resilience* with a five-item scale from Campbell-Sills & Stein (2007). Participants chose the extent to which they agreed with the items from 1 = *strongly disagree* to 7 = *strongly agree*. A sample item is "I am not easily discouraged by failure."

4.3 Analysis Strategy

I tested the hypotheses using Mplus 7.4 (Muthén & Muthén, 2015). I took a two-step approach (Anderson & Gerbing, 1988) by first assessing the measurement model goodness of fit with Confirmatory Factor Analysis (CFA) and then conducting path analyses to test hypotheses. To test the moderated mediation effects (H4 and H5), I followed suggestions from Preacher, Zyphur, and Zhang (2010) to calculate the value of each conditional path at high (+1 *SD*) and low (-1 *SD*) levels of the moderators (Aiken & West, 1991). I constructed 95% bias-corrected confidence intervals around each conditional indirect effect using a Monte Carlo simulation with 20,000 replications (Selig & Preacher, 2008). Moderated mediation would be supported when the confidence interval for the difference between indirect effects at high and low levels of the moderator excludes zero.

4.4 Results

The correlations among key variables are shown in Table 5.

I first conducted confirmatory factor analysis (CFA) to test measurement model fit (including all non-single-item variables). The fitting indices indicate good fit (RMSEA = .06, CFI = .98, TLI = .98).

Hypotheses 1 and 2 are tested with path analyses excluding the moderating effects. Consistent with H1, employment uncertainty was associated with stronger negative emotions (B = .20, *SE* = .09, p = .024). Consistent with H2, employment uncertainty was associated with lower occupational commitment (B = -.35, *SE* = .09, p < .001).

To test Hypotheses 3a and 3b, I added moderators (work orientations) to path analysis. Table 6 contains path analysis results with calling orientation as the moderator; Table 7 contains path analysis results with job orientation as the moderator; Table 8 contains path analysis results with career orientation as the moderator. With calling as the moderator, the moderating effect on the relationship between employment uncertainty and negative emotions was significant (*B* = -.09, *SE* = .04, p = .026), supporting H3a. As Figure 6 shows, the effect of employment uncertainty on negative emotions was weaker at higher levels of calling orientation (*B* = .02, *SE* = .12, p = .848) than at lower levels (*B* = .37, *SE* = .12, p = .002). Supporting H3b, the moderating effect of calling on the relationship between employment uncertainty and occupational commitment was significant (*B* = .09, *SE* = .04, p = .014). As Figure 7 shows, the effect of employment uncertainty on occupational commitment was weaker at higher levels of calling orientation (*B* = -.08, *SE* = .10, p = .433) than at lower levels (*B* = -.40, *SE* = .10, p < .001).

With job orientation as the moderator, the moderating effect on the relationship between employment uncertainty and negative emotions was significant (*B* = .10, *SE* = .04, p = .016),

supporting H3a. As Figure 8 shows, the effect of employment uncertainty on negative emotions was stronger at higher levels of job orientation (B = .34, SE = .12, p = .005) than at lower levels (B = -.06, SE = .12, p = .615). The moderating effect of job orientation on the relationship between employment uncertainty and occupational commitment was non-significant (B = .03, SE = .04, p = .429), failing to support H3b.

With career orientation as the moderator, the moderating effect on the relationship between employment uncertainty and negative emotions was non-significant (B = .04, SE = .05, p = .388), failing to support H3a. The moderating effect of career orientation on the relationship between employment uncertainty and occupational commitment was non-significant (B = .08, SE = .05, p = .115), failing to support H3b.

To test hypotheses 4 and 5, I followed suggestions from Preacher, Zyphur, and Zhang (2010) to calculate the value of each conditional path at high (+1 *SD*) and low (-1 *SD*) levels of the moderators (Aiken & West, 1991). I constructed 95% bias-corrected confidence intervals around each conditional indirect effect using a Monte Carlo simulation with 20,000 replications (Selig & Preacher, 2008). Moderated mediation would be supported when the confidence interval for the difference between indirect effects at high and low levels of the moderator excludes zero. Because only calling had a significant moderating effect on the relationship between employment uncertainty and occupational commitment, it would only make sense to test the moderated mediation effects with calling as moderator. H4 and H5 would not be supported when job or career are moderators. Table 9 provides a summary of the results.

With calling as the moderator, employment uncertainty had a significant indirect effect on hedging behavior via occupational commitment when calling was low (indirect effect = .07, 95% CI [.001, .172]), but the effect became non-significant when calling was high (indirect

effect = .01, 95% CI [-.01, .07]). The difference between the two conditional indirect effects was significant (*difference estimate* = -.01, 95% CI [-.0433, -.0001]), supporting H4.

Employment uncertainty had a significant indirect effect on live like working behavior via occupational commitment when calling was low (indirect effect = -.07, 95% CI [-.16, -.01]), but the effect became non-significant when calling was high (indirect effect = -.01, 95% CI [-.07, .02]). The difference between the two conditional indirect effects was significant (*difference estimate* = .015, 95% CI [.002, .041]), supporting H5.

Robustness check

I checked robustness of the findings by adding control variables to path analysis. For the path from employment uncertainty to negative emotions, I controlled perceived psychological contract breach and financial resource (income level) because both variables have been linked to negative emotions by past research (Vinokur, Price, & Caplan, 1996; Zhao, Wayne, Glibkowski, & Bravo, 2007). For the path from employment uncertainty to occupational commitment, I also controlled perceived psychological contract breach since previous research findings on its impact on reduced commitment (Bal, De Lange, Jansen, & Van Der Velde, 2008; Ng, Feldman, & Lam, 2010). For the path from occupational commitment to hedging behavior, I controlled for financial resources because it could affect one's financial need to find a job during furlough (Latack & Dozier, 1986; Wanberg, Kanfer, & Rotundo, 2000).

To test the robustness of Hypotheses 1 and 2, I added control variables to the paths from employment uncertainty to negative emotions and occupational commitment. Consistent with H1, employment uncertainty was marginally associated with stronger negative emotions (B = .16, SE = .09, p = .095). Consistent with H2, employment uncertainty was associated with lower occupational commitment (B = -.27, SE = .10, p = .006).

To test the robustness of calling and job orientations' moderating effects as specified in Hypotheses 3a and 3b, I added the control variables to the paths from employment uncertainty to negative emotions and occupational commitment. Table 10 contains path analysis results with calling orientation as the moderator; Table 11 contains path analysis results with job orientation as the moderator. With calling as the moderator, the moderating effect on the relationship between employment uncertainty and negative emotions was significant (B = -.10, SE = .04, p = .019). The effect of employment uncertainty on negative emotions was weaker at higher levels of calling orientation (B = -.02, SE = .12, p = .876) than at lower levels (B = .34, SE = .12, p = .006). These results support H3a. Supporting H3b, the moderating effect of calling on the relationship between employment uncertainty and occupational commitment was significant (B = .09, SE = .04, p = .013). The effect of employment uncertainty on occupational commitment was weaker at higher levels of calling orientation (B = -.04, SE = .10, p = .732) than at lower levels (B = -.36, SE = .11, p = .001). With job as the moderator, the moderating effect on the relationship between employment uncertainty and negative emotions was significant (B = .11, SE = .04, p = .009). The effect of employment uncertainty on negative emotions was stronger at higher levels of job orientation (B = .34, SE = .13, p = .007) than at lower levels (B = -.10, SE = .13, p = .451). These results support H3a.

To test the robustness of hypotheses 4 and 5, I followed suggestions from Preacher, Zyphur, and Zhang (2010) to calculate the value of each conditional path at high (+1 *SD*) and low (-1 *SD*) levels of the moderators (Aiken & West, 1991). I constructed 95% bias-corrected confidence intervals around each conditional indirect effect using the same approach as main analysis but included control variables in the paths specified. Table 12 provides a summary of the results.

With calling as the moderator, employment uncertainty had a significant indirect effect on hedging behavior via occupational commitment when calling was low (indirect effect = .062, 95% CI [.003, .165]), but the effect became non-significant when calling was high (indirect effect = .01, 95% CI [-.03, .06]). The difference between the two conditional indirect effects was significant (*difference estimate* = -.0152, 95% CI [-.0441, -.0004]), supporting H4.

Employment uncertainty had a significant indirect effect on live like working behavior via occupational commitment when calling was low (indirect effect = -.06, 95% CI [-.15, -.01]), but the effect became non-significant when calling was high (indirect effect = -.01, 95% CI [-.06, .03]). The difference between the two conditional indirect effects was significant (*difference estimate* = .016, 95% CI [.002, .041]), supporting H5.

Exploratory analysis on the moderation of the relationship between occupational commitment and behaviors

Although not shown in the qualitative study, it is possible that people with stronger calling orientation not only respond differently to uncertainty leading to different levels of occupational commitment but that they also respond differently to changes in commitment in terms of hedging and live like working, such that at the same level of occupational commitment, calling-oriented workers may opt to more live like working and less hedging. Job- or career-oriented workers, on the contrary, may engage in more hedging and less live like working. Therefore, I conducted an exploratory analysis to understand whether people with different work orientations may be affected by their occupational commitment differently. I tested the moderating effects of work orientation on the relationship between occupational commitment and their behaviors (hedging and live like working). I conducted ordinary least square (OLS) regressions, including occupational commitment, work orientation, and an interaction term

between the two. None of the interactions was significant for hedging (job: B = -.09, SE = .05, p = .086; career: B = .05, SE = .05, p = .338; calling: B = .04, SE = .04, p = .327) or live like working (job: B = .03, SE = .04, p = .517; career: B = .05, SE = .05, p = .338; calling: B = -.03, SE = .05, p = .490).

Exploratory analysis on alternative moderators

I conducted path analyses to test if the two alternative moderators moderate employment uncertainty's effects on negative emotions or occupational commitment. With perceived sense of control as the moderator, the moderating effect on the relationship between employment uncertainty and negative emotions was marginally significant (B = -.11, SE = .07, p = .092). The effect of employment uncertainty on negative emotions was weaker at higher levels of perceived sense of control (B = .07, SE = .11, p = .499) than at lower levels (B = .33, SE = .12, p = .006). The moderating effect on the relationship between employment uncertainty and occupational commitment was non-significant (B = -.02, SE = .07, p = .800).

With resilience as the moderator, the moderating effect on the relationship between employment uncertainty and negative emotions was non-significant (B = .05, SE = .07, p = .481). The moderating effect on the relationship between employment uncertainty and occupational commitment was also non-significant (B = .001, SE = .07, p = .988).

4.5 Follow-up Study

In early July of 2021 (about one year after the second-wave survey), I conducted a third-wave survey to follow up with the respondents. The goals of the survey include 1) to understand the recent work and financial status of the furloughed workers; 2) to learn whether employment uncertainty could affect health-related behaviors other than the ones identified in the qualitative analysis; and 3) to learn whether work orientations could moderate the influences on these other

behaviors. I focused on the health-related behaviors such as over-drinking and over-eating because I was concerned about the longer-term impact of employment uncertainty as furloughs extended longer. If uncertainty could indeed lead to such impact, furlough could be more alarming to scholars and regulators because it could be the trigger for chronic public health problems. Particularly, I expected the negative emotions caused by employment uncertainty to accumulate as furlough prolongs and cause depression among furloughed workers (Beck & Alford, 2009; Hammen, 2005). Under the impact of depression, the furloughed workers may engage in unhealthy behaviors such as over-drinking and over-eating:

> ***Hypothesis 6a****: A furloughed worker's depression mediates the relationship between employment uncertainty and over-drinking.*
> ***Hypothesis 6b****: A furloughed worker's depression mediates the relationship between employment uncertainty and over-eating.*

Combining with the moderating effect of work orientation on the relationship between employment uncertainty and negative emotions (H3a), I propose:

> ***Hypothesis 7a****: A furloughed worker's work orientation moderates the indirect relationship (through accumulated negative emotions) between employment uncertainty and over-drinking. The more one is job or career oriented, the stronger is the positive relationship, whereas the more one is calling oriented, the weaker is the positive relationship.*
> ***Hypothesis 7b****: A furloughed worker's work orientation moderates the indirect relationship (through accumulated negative emotions) between employment uncertainty and over-eating. The more one is job or career oriented, the stronger is the positive relationship, whereas the more one is calling oriented, the weaker is the positive relationship.*

4.5.1 Sample

The survey was sent out to the same group of participants on Prolific Academic. Seventy-five participants who completed the second-wave survey completed the third-wave survey (81.3% Caucasian; 65.3% female; average age = 34.24 years, *SD* = 13.56; average full-time employment length = 7.31 years, *SD* = 9.60).

4.5.2 Measures

Financial precarity. I measured their financial precarity (worry about their financial situation) during furlough with four items adapted from Meuris and Leana (2018). A sample item was "how often have you been worried about your financial situation during furlough." Participants chose from 1 = "never" to 7 = "always." Similarly, I measured their current financial precarity by asking the same questions but changing the time reference to "recently."

Depression. Depression was measured with seven items from Orth, Robins, and Meier (2009). A sample item was "I felt depressed." Participants chose how often they felt this way during furlough, from 1 = "rarely" to "7 = all of the time."

Over-drinking. Over-drinking was measured with three items from Saunders, Aasland, Babor, Fuente, and Grant (1993). Participants indicated how often they engaged in overdrinking behaviors during furlough, from 1 = "never" to 7 = "very often." A sample item was "how often have you found that you were not able to stop drinking once you had started."

Over-eating. Over-eating was measured with four items from Liu et al. (2017). Participants indicated the extent to which they agreed with the statements, from 1 = "strongly disagree" to 7 = "strongly agree." A sample item was "I ate too many junk foods."

4.5.3 Results

The status of furloughed workers

Out of the 75 respondents, nine (12%) were still on furlough from the same position; twenty-one (28%) were laid off because their position was removed or assigned to someone else; twenty-nine (38.7%) went back to the position they were furloughed from; and sixteen (21.3%) rejected the offer to go back to the same position. On average, the furlough lasted for 33.8 weeks (*SD* = 21.99).

A paired t-test indicated that financial precarity has in general reduced from the furlough period to present (*average financial precarity during furlough* = 5.54, *SD* = 1.62; *average financial precarity at present* = 5.00, *SD* = 1.48; *t* (148) = -2.11, *p* = .036).

Impacts of employment uncertainty on depression and unhealthy behaviors

I tested hypotheses 6a and 6b with path analysis, combined with a Monte Carlo simulation with 20,000 replications (Selig & Preacher, 2008). **Table 14 to 16** show the results of path analysis. Employment uncertainty was positively associated with depression (*B* = .23, *SE* = .13, *p* = .070), which was positively associated with over-drinking (*B* = .23, *SE* = .08, *p* = .003). The indirect effect was significant (indirect effect = .073, 95% CI [.002, .149]), supporting H6a. Depression was also positively associated with over-eating (*B* = .47, *SE* = .10 *p* < .001). The indirect effect was significant (indirect effect = .151, 95% CI [.002, .261]), supporting H6b.

Moderating effects of work orientations

To test hypotheses 7a and 7b, I followed suggestions from Preacher et al. (2010) to calculate the value of each conditional path at high (+1 *SD*) and low (-1 *SD*) levels of the moderators (Aiken & West, 1991).

With calling orientation as the moderator, employment uncertainty had a significant indirect effect on over-drinking via depression when calling was low (indirect effect = .12, 95% CI [.04, .28]), but the effect became non-significant when calling was high (indirect effect = -.002, 95% CI [-.09, .08]). The difference between the two conditional indirect effects was significant (*difference estimate* = -.04, 95% CI [-.09, -.01]), supporting H7a. Similarly, employment uncertainty had a significant indirect effect on over-eating via depression when calling was low (indirect effect = .25, 95% CI [.09, .49]), but the effect became non-significant

when calling was high (indirect effect = -.004, 95% CI [-.16, .16]). The difference between the two conditional indirect effects was significant (*difference estimate* = -.07, 95% CI [-.16, -.02]), supporting H7b.

With job orientation as the moderator, employment uncertainty had a non-significant indirect effect on over-drinking via depression when job orientation was low (indirect effect = -.03, 95% CI [-.13, .05]), but the effect became significant when job orientation was high (indirect effect = .12, 95% CI [.03, .27]). The difference between the two conditional indirect effects was significant (*difference estimate* = .04, 95% CI [.01, .09]), supporting H7a. Similarly, employment uncertainty had a non-significant indirect effect on over-eating via depression when job orientation was low (indirect effect = -.05, 95% CI [-.24, .11]), but the effect became significant when job orientation was high (indirect effect = .24, 95% CI [.09, .47]). The difference between the two conditional indirect effects was significant (*difference estimate* = .07, 95% CI [.02, .15]), supporting H7b.

With career orientation as the moderator, employment uncertainty had a non-significant indirect effect on over-drinking via depression when career orientation was low (indirect effect =.03, 95% CI [-.04, .14]), but the effect became significant when career orientation was high (indirect effect = .08, 95% CI [.004, .23]). Yet the difference between the two conditional indirect effects did not reach statistical significance (*difference estimate* = .02, 95% CI [-.02, .07]), failing to support H7a. Employment uncertainty had a non-significant indirect effect on over-eating via depression when career orientation was low (indirect effect = .07, 95% CI [-.09, .26]), but the effect became significant when career orientation was high (indirect effect = .17, 95% CI [.003, .40]). The difference between the two conditional indirect effects did not reach statistical significance (*difference estimate* = .03, 95% CI [-.05, .13]), supporting H7b.

Chapter 5: Discussion

The world has seen a rapid surge of furloughs during the COVID-19 Pandemic, but organizational research's understanding of the phenomenon is rather limited, calling for research to uncover its nature and impacts. Drawing from three streams of research on uncertainty from getting an electric shock, suffering from illness, and missing relatives, I propose employment uncertainty (the inability to predict the future of the employment relationship) as a unique feature that differentiates furlough from other types of involuntary job losses (e.g., layoff, firing), and this uncertainty could independently affect furloughed workers psychologically and behaviorally. Moreover, I propose work orientation as a moderating variable that would affect the strength of employment uncertainty's impact on affective, altitudinal and behavioral outcomes. Through a qualitative study, I identified employment uncertainty's impact on workers' negative emotions and occupational commitment, which could further affect behaviors such as hedging and "live like working." By comparing across workers of different work orientations, I further hypothesized work orientation's moderating role. A multi-wave survey of furloughed workers from a variety of industries generally supported the hypotheses. A follow-up survey of the same group of furloughed workers after one year has further shown the longer-term effects of employment uncertainty associated with furlough. The negative emotions accumulating over time could affect the lifestyle of workers and make them engage more unhealthy behaviors such as over-drinking and over-eating. Table 17 summarizes the hypotheses and findings of my dissertation. The research findings have significant implications for theory and practice.

5.1 Theoretical Implications

The most important theoretical implication of our research is that it uncovers how employment uncertainty as the defining nature of furloughs could affect furloughed workers both

psychologically and behaviorally. Although furlough does not sever the employment relationship like layoffs or firing do, it puts a pause on the employment relationship, which triggers unsettling thoughts and emotions. This explains the finding by Qualtrics (Werber, 2020) that furlough induces similar, if not more severe amount of harm to workers' mental health as layoffs. Building on research on uncertainties associated with aversive events (Boss, 2002; Epstein & Roupenian, 1970; Mishel, 1990) and qualitative analysis of interviews, I theorize and test one of the first models to understand furloughs as a unique phenomenon. Thus, I enrich the conversations on involuntary job loss by broadening its scope beyond layoffs. Furloughs, which are qualitatively different from layoffs because of the employment uncertainty involved, merit investigations by organizational research. Our research has taken the initial efforts to generate insights on the impact of furlough on the furloughed employees. More work is needed to further unpack the phenomenon by answering questions such as the impact of furlough on observers (unfurloughed colleagues of furloughed workers), the managerial decision-making process of furloughs, and the long-term consequences of furlough on workers and their organizations.

My research further contributes to the involuntary job loss literature by introducing work orientation as a moderating variable. Although this construct is relatively new to the involuntary job loss literature, I identified its potential importance based on understanding of the meaningful work literature and findings from the qualitative study. The moderating role by work orientation was then confirmed by the quantitative study and the follow-up study. These efforts thus echo the call to "think really big" (Hom et al., 2017: 540) on tackling the issue of variations across employee populations and point out a new direction when thinking about the impacts of involuntary job loss. What I have found for furloughed workers may have implications for research on unemployment and job search (e.g., Kanfer et al., 2001; Prussia et al., 2001). The

resilience shown by the calling-oriented workers may suggest that they would be less susceptible to the emotional impacts of being unemployed and more motivated to take actions to get reemployed in their domain of their calling.

At the same time, my research contributes to the literature of meaningful work by studying work orientation's impact on unemployed workers. Research on meaningful work has primarily focused on studying employed workers (e.g., Cho & Jiang, 2021; Thompson & Bunderson, 2019). By theorizing and finding calling's buffering role in alleviating employment uncertainty's harms, the current research extends the conversation surrounding work orientation to employees who suffer from involuntary job loss. In this respect, our research shows that work orientation is not only meaningful to someone without a job but also influential in shaping how they react to adverse situations. Particularly, a sense of calling could be beneficial for overcoming these challenges by providing the narrative and direction needed to help someone stay positive and focused.

My dissertation also enriches the conversations on uncertainty about aversive events. As suggested by my review of this literature, past research has generally found or suggested the behavioral reactions to uncertainty as either escaping from reality (e.g., seeking distraction; Luster et al., 2009) or taking control (e.g., seeking information; Hilton, 1988). What is common between the two strategies is that both are motivated to reduce uncertainty because the feeling of uncertainty is unsettling (de Berker et al., 2016; Lazarus & Folkman, 1984). This is consistent with the motivation behind hedging behaviors in my dissertation. By preparing and taking actions to enter a different domain of work, the furloughed workers would like to reduce employment uncertainty in the future so they are less likely to be furloughed again. However, what the motivation cannot explain is some furloughed workers' behavior to live like working,

as I observed in the interviews. Instead of taking actions to reduce uncertainty, these workers are embracing it by doubling down their efforts in the current domain, such as volunteering to work in an uncertain employment relationship or to do something else in their current domain. This tendency was particularly salient for calling-oriented workers, suggesting that work orientation and perhaps other belief systems may be able to shield people from the impact of uncertainty, so that they become less bothered by uncertainty and thus less motivated to reduce it. In this way, they can better live with uncertainty and remain on the path to which they are committed. For the calling-oriented worker, this means they can persevere under employment uncertainty because they care more and pay more attention to whether they are doing something related to their calling, rather than whether they will lose the job from which they were furloughed.

5.2 Practical Implications

My dissertation also has important and timely implications for managers, employees, and regulators. For managers, the research suggests the toxicity of employment uncertainty that was created by furlough (e.g., worsening mental and physical health in both short and long terms), so it is probably a better practice for managers to lay off their employees instead of furloughing them if they do not expect to bring the employees back. When considering the furlough option, many organizations made decisions based on some sort of cost-benefit analysis and concluded that the benefits of flexibility and cost savings may outweigh the administrative costs and burdens on the furloughed workers (Sucher & Gupta, 2020). My research suggests that the negative impacts on the furloughed workers need to be considered more strongly because the uncertainty makes workers suffer emotionally, reduce commitment, and engage in unhealthy behaviors. All these factors can increase their likelihood of quitting their job and lower their

productivity even if they go back to work, incurring larger costs on the organization in the long run.

If managers do have to use furloughs, to reduce the negative impacts of employment uncertainty, managers should take efforts to alleviate the employment uncertainty, for example, by providing information and updates to the furloughed workers and keeping them in the loop while making important decisions. Given the moderating role of work orientations, it may also be worthwhile for managers to understand the different impacts that uncertainty may have across workers with different work orientations. Managers can help employees identify and foster their sense of calling so that they could have greater resilience against unforeseen employment challenges such as uncertainty. Managers may also need to provide extra mental health support to job-oriented workers as they could be more susceptible to the negative effects of these challenges.

For furloughed workers, the current research suggests the importance of finding meaning in one's work. By seeing one's work as a calling rather than just a means to make money or a pathway to higher-level positions, one could be more resilient against challenging situations such as experiencing employment uncertainty caused by furlough. For example, the furloughed workers that had stronger calling orientation suffered less emotionally and remained committed to their occupation despite the uncertainty they felt. According to research on meaningful work, a useful step toward realizing one's calling is usually to find a position or an occupation that fits one's interests (Duffy & Dik, 2013). How to find the most fitting occupation may vary across individuals. More recent work by Bloom, Colbert, and Nielsen (2021) further specifies that the path toward realizing one's calling could be linear (discerning) or zigzagging (exploratory). What is common across the two pathways is that both would require enough work experience so

that someone can realize the connection between themselves and their work that they can call it a "calling."

For regulators, actions need to be taken to specify the rules and procedures for furloughs. Part of the reasons behind the uncertainty felt by the furloughed workers was lack of regulation. Because there exists no laws or rules for furloughs other than the fact sheet, organizations are not legally bounded to set an expected return date furlough, to keep the furloughed workers informed, to maintain the same benefits during furlough, or to guarantee the position for the worker after furlough ends. Thus, many of these questions are unaddressed by companies, leaving the furloughed workers in an uncertain and disadvantaged situation. As I have shown in the dissertation, the uncertainty itself could be harmful to workers mental and physical health, so reducing the uncertainty by setting rules on furlough can have a profound societal impact on public health and worker productivity.

5.3 Limitations and Future Directions

The research has a number of limitations in its methodology. The snowball sampling used in the qualitative study may not get a representative sample of the furlough population across all the industries. Despite that the interviewees represented most of the industries that appeared in the news search of large-scale furloughs, some industries could be under-represented whereas some may be over-represented. For example, no one of the interviewees was from the transportation industry, whereas five interviewees worked in a casino, four worked in a university, and four worked in a hospital. Although those from the same industry were not necessarily working in the same organizations or having the same roles, the lower diversity of industries may limit the generalizability of the findings. Yet, with the privacy restrictions by organizations in giving contact information of their furloughed employees, snowball sampling

seemed to be the only feasible option. Another drawback of the snowballing technique was that it limits the availability of employees across all three work orientations. For example, relatively fewer interviewees identified their work as a career. Although I focused more on calling, this unbalanced distribution could have limited my ability to generate any insight about the career-oriented workers. However, these limitations are largely offset by the quantitative study, which has a more representative sample of furloughed workers from different industries and with different work orientations.

The quantitative study was limited in the way it was conducted. First, the newly proposed constructs of hedging and "live like working" behaviors were tested only with measures of their core elements (job searching, volunteering in one's domain). This was to increase the reliability of the scales and goodness of fit of the measurement model, but this approach may limit the accuracy of the scales in measuring the constructs. Second, the sample sizes of the survey studies were small due to the availability of the furloughed workers, particularly for the follow-up survey. This means that some effects, particularly those in the follow-up survey, could be underpowered[9] (Button et al., 2013). Third, all variables (independent variable, mediators, dependent variables) were measured in the wave 2 survey instead of being time-lagged. This prevents me from drawing conclusions about causal relationships (Kenny & Harackiewicz, 1979).

[9] I conducted post-hoc power analyses based on the actual effect sizes of the interaction effect between work orientation and employment uncertainty in the main study and the follow-up survey. In the main study, the interaction between calling orientation and employment uncertainty on negative emotions ($f^2 = .075$) yielded a power of .78 at an α of .05; the interaction between calling orientation and employment uncertainty on occupational commitment ($f^2 = .695$) yielded a power of 1 at an α of .05; the interaction between job orientation and employment uncertainty on negative emotions ($f^2 = .11$) yielded a power of .93 at an α of .05. In the follow-up survey, the interaction between calling orientation and employment uncertainty on depression ($f^2 = .136$) yielded a power of .75 at an α of .05; the interaction between job orientation and employment uncertainty on depression ($f^2 = .149$) yielded a power of .79 at an α of .05.

Besides the methodological limitations, the hypotheses on work orientation's moderating roles were not fully supported. Job orientation's moderating role on the relationship between employment uncertainty and occupational commitment was not supported; career orientation's moderating roles were not supported. These results may indicate the particular importance of seeing one's work as a calling – when one's passion matches the service of others' needs through work, the two feelings transcend into something greater, a sense of destiny that keeps one motivated and committed despite adversity (Maslow, 1943; Thompson & Bunderson, 2019). The lack of support for hypotheses about job or career orientations could be due to the lack of understanding of these groups of workers due to the lack of representation of particularly career-oriented workers in the interviewee sample. It could be also due to that compared with calling, job or career orientations play less important roles in shaping one's reactions to uncertainty.

My research has taken the initial efforts to generate insights on the impact of furlough on the furloughed employees. Future research could further unpack different aspects of the phenomenon by answering questions such as the impact of furlough on observers (unfurloughed colleagues of furloughed workers), the managerial decision-making process of furloughs, and the long-term consequences of furlough on workers and their organizations. As the most recent round of furloughs recede, more questions and opportunities arise for organizational scholars. For example, is there any linkage between the large-scale furlough in 2020 and the increasing occurrences of voluntary turnover in 2021 and 2022 (or some would call "the great resignation") (Cohen, 2021; Cook, 2021)? My research finding on uncertainty's effect on occupational commitment and hedging behaviors would predict that trend. Indeed, an analysis of the respondents to the follow-up survey suggests that employment uncertainty they experienced during furlough reported in the original survey was negatively associated with their likelihood of

accepting their offer to go back to work (log odds = -1.10, *SE* = .38, $p < .01$, *N* = 45). In other words, one unit increase of uncertainty translated to 75% lower likelihood to accept the offer to go back to work.

In a longer time frame, will the uncertainty workers experienced during furlough have an imprinting effect on their future careers by making them more likely to feel uncertain (Simsek, Fox, & Heavey, 2015)? Under the impact of those uncertainties, will they become more cautious and less risk-taking? Will they engage in more hedging behaviors at work such as withholding their opinions and refraining from voicing? Answering these questions can help us understand the downstream impacts of furlough, which are meaningful for both employees and organizations.

In addition, future research could look broadly at furlough's impact across cultures. My dissertation was conducted in United States. However, the findings may differ across cultures because people from different cultures differ in their uncertainty avoidance, i.e., "the extent to which the members of a culture feel threatened by ambiguous or unknown situations" (Hofstede, 2010: 190). People from cultures of high uncertainty avoidance are less tolerant of uncertainty, so they may react more negatively against uncertainty. United States ranked 64 out of 76 countries, meaning the culture is relatively tolerant of uncertainty. I found the negative impact of employment uncertainty on furloughed workers in the US culture, which suggests that the effects could be even stronger in cultures with higher uncertainty avoidance, such as Greece, Portugal, Guatemala, and Japan (Hofstede, 2010). Another factor that may affect findings in a different country is the levels of regulation and social safety net. Compared to other countries, US has fewer regulations for furloughs a less comprehensive safety net for furloughed workers (Aaron, 2020; Sandiford, 2021). For example, the United Kingdom introduced the Coronavirus Job

Retention Scheme, which regulated furloughs in more detail and provided government funding for up to 80% of the furloughed workers' salary before furlough. Understanding the differences across cultures and countries could generate important insights on furlough as a global phenomenon.

Chapter 6: Conclusion

Existing research on involuntary job loss has primarily focused on layoffs, but I propose that furloughs as a type of involuntary job loss merit scholarly attention because the uncertainty they involve surrounding the employment relationship could independently cause psychological and behavioral impacts. Building on a review of relevant research and a qualitative study of furloughed workers, I constructed a model that specifies the impacts of employment uncertainty and the moderating effects of work orientation. Results of a survey study with furloughed workers from various industries largely supported the hypotheses and pointed toward the particular importance of work as a calling. Despite the limitations it has, my research bridges the literatures on involuntary job loss and meaningful work and enriches conversations in both domains of research.

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Tables

Table 1. A Comparison of Past Research on Different Types of Involuntary Job Losses

Type of job loss	**Definition**	**Employment relationship**	**# and % of articles in Mckee-Ryan et al. (2005), N = 101**	**# and % of articles in Paul and Moser (2009), N = 266**	**# and % of articles in Wanberg et al. (2016), N = 67**	**# and % of articles from literature search 2016-2021, N = 95**
Layoff/discharge	Involuntary separations initiated by employer, resulting from eliminated positions, mergers, downsizing, or plant closings	Permanently terminated	7 (6.9%)	26 (9.8%)	7 (11.7%)	39 (40.0%)
Firing	Involuntary separations initiated by employer due to faults of employees	Permanently terminated	1 (1.0%)	1 (.4%)	0	0
Furlough	The placement of employees on leave with no pay of any kind for the period of the leave	On pause	0	1 (.4%)	0	1 (1.0%)
Unspecified	The state of unemployment, could be due to layoffs, firings, furloughs, or never being employed	Permanently terminated, on pause, or never existed	93 (92.1%)	238 (89.5%)	60 (90.0%)	58 (59.2%)

Table 2. Examples of Furloughs in the United States

Industry	Organization	Date of announcement	Estimated number of furloughs	News source
Accommodation and food services	Marriott International	3/17/2020	117,000	Wall Street Journal
Accommodation and food services	Cheesecake Factory	3/27/2020	41,000	Fox Business
Retail trade	Macy's	3/30/2020	125,000	CNN
Retail trade	Kohl's	3/30/2020	85,000	USA Today
Arts, entertainment, and recreation	Caesars International	4/3/2020	59,400	USA Today
Manufacturing	Honda	4/7/2020	18,400	Reuters
Information	Yelp	4/9/2020	1,000	Fortune
Healthcare and social assistance	Tenet Healthcare	4/15/2020	11,000	USA Today
Arts, entertainment, and recreation	Disney	4/19/2020	100,000	Forbes
Healthcare and social assistance	BJC Healthcare	5/20/2020	2,962	STL Today
Educational services	University of Missouri	6/19/2020	3,667	University website
Transportation and warehousing	United & American Airline	10/1/2020	32,000	NPR

Table 3. Qualitative Study Participant Inventory

Self-categorized work orientation	ID.	Occupation before furlough
Calling	1	Long-term part-time elementary school teacher
Calling	2	Nonprofit fundraiser
Calling	3	Nonprofit fundraiser
Calling	4	Nurse educator
Calling	5	Physical therapist trainee
Calling	6	Professional counselor
Calling	7	IT executive
Calling	8	Long-term hospital intern
Calling	9	Casino community relations coordinator
Calling	10	Director of nursing
Calling	11	University director of fundraising
Calling	12	University housekeeping staff
Career	13	Casino supervisor
Career	14	Corporation marketing director
Career	15	Hotel digital marketing staff
Career	16	Movie sound recorder
Job	17	Casino pit manager
Job	18	Lake resort lifeguard
Job	19	Casino chef
Job	20	Casino pit manager
Job	21	University computer programmer
Job	22	Hospital administrator
Job/Calling	23	University magazine copyeditor
Job	24	University administrator
Job	25	Furniture store sales manager
Job	26	Restaurant waitress
Job	27	Retail associate
Job	28	Customer service representative

Table 4. Breakdown of Industries of Participants in Waves 1 and 2 Surveys

Industries	Percentage of participants in Wave 1 (N = 298)	Percentage of participants in Wave 2 (N = 141)
Accommodation and food services	23.2%	22.0%
Retail trade	15.4%	12.8%
Arts, entertainment, and recreation	12.8%	15.6%
Health care and social assistance	9.4%	7.1%
Professional, scientific, and technical services	9.1%	7.8%
Educational services	9.1%	14.9%
Information	4.4%	3.5%
Manufacturing	4.0%	4.3%
Non-profits	2.0%	2.6%
Administrative support, waste management, and remediation	2.0%	2.8%
Others	8.6%	6.6%

Table 5. Correlation Table among Key Variables in Wave 2 Survey

Variable	***Mean***	***SD***	**1**	**2**	**3**	**4**	**5**	**6**	**7**
1. Employment uncertainty	3.67	1.46							
2. Negative emotions	2.75	1.55	.19*						
3. Occupational commitment	4.49	1.67	-.31**	-.10					
4. Hedging	2.97	1.82	.25**	.03	-.21*				
5. Live like working	2.05	1.46	.06	.03	.17*	.13			
6. Work orientation: job	4.00	1.96	.28**	.22**	-.67**	.09	-.10		
7. Work orientation: career	4.63	1.61	-.04	.10	-.01	.18*	.05	-.02	
8. Work orientation: calling	3.05	1.87	-.19*	-.08	.59**	.08	.23**	-.56**	.02

Note. $N = 141$. * $p < .05$. ** $p < .01$.

Table 6. Path Analysis with Calling Orientation as Moderator

	Negative emotions		Occupational commitment		Hedging		Live like working	
	B	SE	B	SE	B	SE	B	SE
Employment uncertainty	.20*	.09	-.24**	.08	.25*	.11	.12	.09
Work orientation (Calling)	-.05	.07	.51**	.06	—	—	—	—
Interaction (Occupational commitment × Calling)	-.09*	.04	.09*	.04	—	—	—	—
Occupational commitment	—	—	—	—	-.16†	.09	.18*	.08

Note. $N = 141$. † $p < .1$. * $p < .05$. ** $p < .01$.

Table 7. Path Analysis with Job Orientation as Moderator

	Negative emotions		Occupational commitment		Hedging		Live like working	
	B	SE	B	SE	B	SE	B	SE
Employment uncertainty	.14	.09	-.16*	.07	.25*	.11	.12	.09
Work orientation (Job)	.12†	.07	-.54**	.06	—	—	—	—
Interaction (Occupational commitment × Job)	.10*	.04	.03	.04	—	—	—	—
Occupational commitment	—	—	—	—	-.16†	.09	.17*	.08

Note. $N = 141$. † $p < .1$. * $p < .05$. ** $p < .01$.

Table 8. Path Analysis with Career Orientation as Moderator

	Negative emotions		Occupational commitment		Hedging		Live like working	
	B	SE	B	SE	B	SE	B	SE
Employment uncertainty	.22*	.09	-.32**	.09	.25*	.11	.12	.09
Work orientation (Career)	.11	.08	-.02	.08	—	—	—	—
Interaction (Occupational commitment × Career)	.04	.05	.08	.05	—	—	—	—
Occupational commitment	—	—	—	—	-.17†	.09	.18*	.08

Note. $N = 141$. † $p < .1$. * $p < .05$. ** $p < .01$.

Table 9. Summary of Hypothesized Indirect Effects

	Indirect Effect	**Conditional Indirect Effect**
Employment uncertainty → Occupational commitment → Hedging	**.039 [.001, .108]**	
Calling		
High		.01 [-.01, .07]
Low		**.066 [.001, .172]**
Difference		**-.014 [-.0433, -.0001]**
Employment uncertainty → Occupational commitment → Live like working	**-.04 [-.10, -.01]**	
Calling		
High		-.01[-.07, .02]
Low		**-.07 [-.16, -.01]**
Difference		**.015 [.002, .041]**

Note. 95% Confidence intervals are shown in brackets. Prior work suggests that moderated mediation exists when the confidence interval for the difference between two conditional indirect effects excludes zero (Preacher et al., 2007). Effects in boldface indicate significant effects (bias-corrected CI shown). to obtain The bias-corrected confidence intervals of each conditional indirect effect were generated with Monte Carlo simulation with 20,000 replications (Selig & Preacher, 2008).

Table 10. Path Analysis with Calling Orientation as Moderator (with Control Variables)

	Negative emotions		Occupational commitment		Hedging		Live like working	
	B	SE	B	SE	B	SE	B	SE
Employment uncertainty	.16†	.09	-.20*	.08	.25*	.11	.12	.09
Work orientation (Calling)	-.03	.07	.49**	.06	—	—	—	—
Interaction (Occupational commitment × Calling)	-.10*	.04	.09*	.04	—	—	—	—
Occupational commitment	—	—	—	—	-.17†	.09	.18*	.08
Perceived psychological contract breach	.10	.09	-.10	.08	—	—	—	—
Income level	-.09*	.04	—	—	.04	.05	—	—

Note. $N = 141$. † $p < .1$. * $p < .05$. ** $p < .01$.

Table 11. Path Analysis with Job Orientation as Moderator (with Control Variables)

	Negative emotions		Occupational commitment		Hedging		Live like working	
	B	SE	B	SE	B	SE	B	SE
Employment uncertainty	.12	.09	-.11	.08	.25*	.11	.12	.09
Work orientation (Job)	.10	.07	-.53**	.06	—	—	—	—
Interaction (Occupational commitment × Job)	.11**	.04	.03	.04	—	—	—	—
Occupational commitment	—	—	—	—	-.17†	.09	.18*	.08
Perceived psychological contract breach	.07	.09	-.11	.08	—	—	—	—
Income level	-.09*	.04	—	—	.04	.05	—	—

Note. $N = 141$. † $p < .1$. * $p < .05$. ** $p < .01$.

Table 12. Summary of Hypothesized Indirect Effects (with Control Variables)

	Indirect Effect	**Conditional Indirect Effect**
Employment uncertainty → Occupational commitment → Hedging	**.034 [.001, .100]**	
Calling		
High		.01 [-.03, .06]
Low		**.062 [.003, .165]**
Difference		**-.0152 [-.0441, -.0004]**
Employment uncertainty → Occupational commitment → Live like working	**-.04 [-.09, -.01]**	
Calling		
High		-.01[-.06, .03]
Low		**-.06 [-.15, -.01]**
Difference		**.016 [.002, .041]**

Note. 95% Confidence intervals are shown in brackets. Prior work suggests that moderated mediation exists when the confidence interval for the difference between two conditional indirect effects excludes zero (Preacher et al., 2007). Effects in boldface indicate significant effects (bias-corrected CI shown). to obtain The bias-corrected confidence intervals of each conditional indirect effect were generated with Monte Carlo simulation with 20,000 replications (Selig & Preacher, 2008).

Table 13. Correlation Table among Key Variables in the Follow-Up Survey

Variable	***Mean***	***SD***	**1**	**2**	**3**	**4**	**5**	**6**
1. Employment uncertainty	3.63	1.50						
2. Depression	4.09	1.68	.20†					
3. Over-drinking	1.60	1.16	.01	.32**				
4. Over-eating	4.27	1.67	.08	.47**	.38**			
5. Work orientation: job	4.09	1.97	.13	.11	.05	.12		
6. Work orientation: career	4.60	1.54	-.07	.07	.10	.02	-.07	
7. Work orientation: calling	2.81	1.76	-.25*	.04	-.01	-.02	-.49**	.12

Note. $N = 75$. † $p < .1$. * $p < .05$. ** $p < .01$.

Table 14. Path Analysis with Calling Orientation as Moderator (Follow-Up Survey)

	Depression		Over-drinking		Over-eating	
	B	SE	B	SE	B	SE
Employment uncertainty	.26*	.13	-.05	.09	-.02	.12
Work orientation (Calling)	-.03	.11	—	—	—	—
Interaction (Depression × Calling)	-.16*	.06	—	—	—	—
Depression	—	—	.23**	.08	.47**	.10

Note. $N = 75$. * $p < .05$. ** $p < .01$.

Table 15. Path Analysis with Job Orientation as Moderator (Follow-Up Survey)

	Depression		Over-drinking		Over-eating	
	B	SE	B	SE	B	SE
Employment uncertainty	.20	.12	-.05	.09	-.02	.12
Work orientation (Job)	.04	.09	—	—	—	—
Interaction (Depression × Job)	.16*	.06	—	—	—	—
Depression	—	—	.23**	.08	.47**	.10

Note. $N = 75$. * $p < .05$. ** $p < .01$.

Table 16. Path Analysis with Career Orientation as Moderator (Follow-Up Survey)

	Depression		Over-drinking		Over-eating	
	B	SE	B	SE	B	SE
Employment uncertainty	.25†	.13	-.05	.09	-.02	.12
Work orientation (Career)	.09	.12	—	—	—	—
Interaction (Depression × Career)	.07	.09	—	—	—	—
Depression	—	—	.23**	.08	.47**	.10

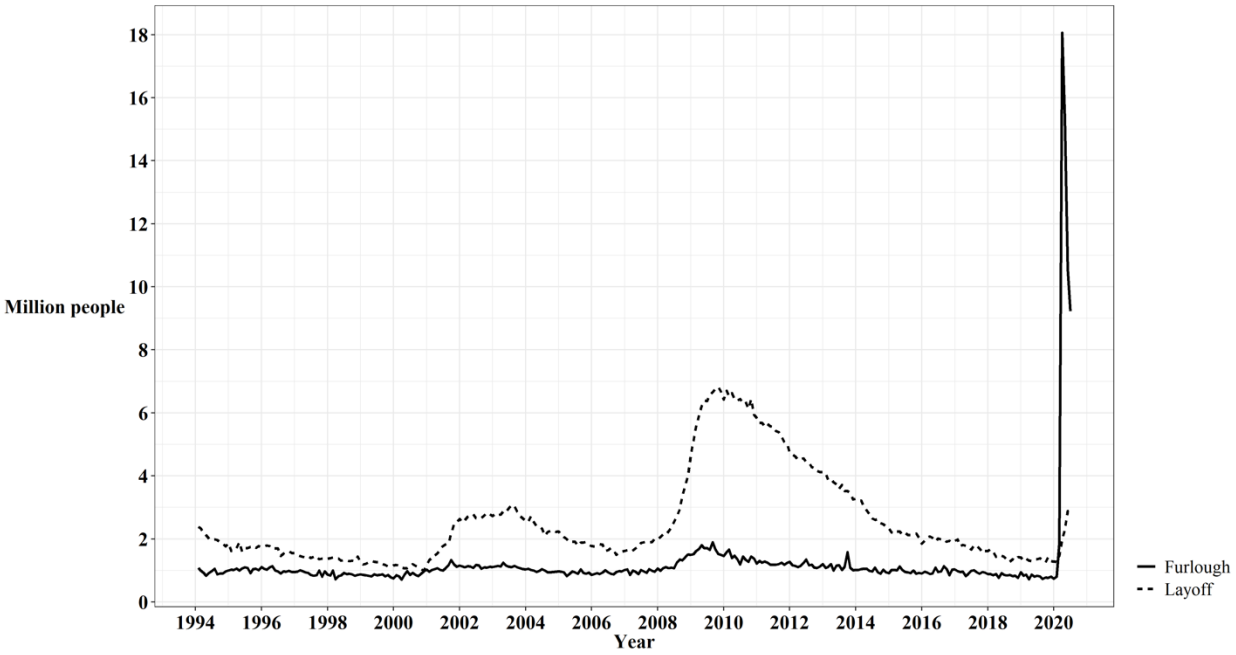
Note. $N = 75$. † $p < .1$. * $p < .05$. ** $p < .01$.

Table 17. Summary of Hypotheses and Findings

Hypothesis	Relationship	Finding	
H1	Employment uncertainty -> Negative emotions		Supported
H2	Employment uncertainty -> Occupational commitment		Supported
H3a	Work orientation's moderating role on H1	Calling	Supported
		Job	Supported
		Career	Not supported
H3b	Work orientation's moderating role on H2	Calling	Supported
		Job	Not supported
		Career	Not supported
H4	Moderated mediation on negative emotions	Calling	Supported
		Job	Not supported
		Career	Not supported
H5	Moderated mediation on occupational commitment	Calling	Supported
		Job	Not supported
		Career	Not supported
H6a	Employment uncertainty -> Depression -> Over-drinking		Supported
H6b	Employment uncertainty -> Depression -> Over-eating		Supported
H7a	Work orientation's moderated mediation on over-drinking	Calling	Supported
		Job	Supported
		Career	Not supported
H7b	Work orientation's moderated mediation on over-eating	Calling	Supported
		Job	Supported
		Career	Supported

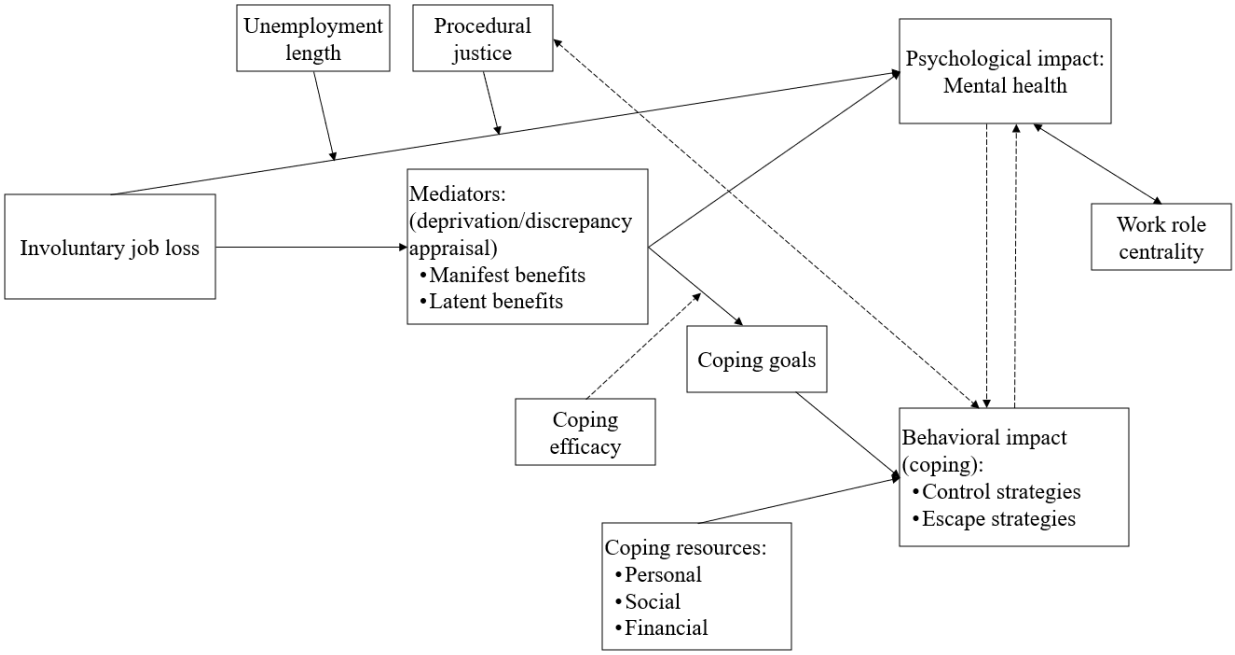
Figures

Figure 1. Number of Furloughs and Layoffs in US Since 1994



Source: US Bureau of Labor Statistics, retrieved from Federal Reserve Bank of St. Louis.

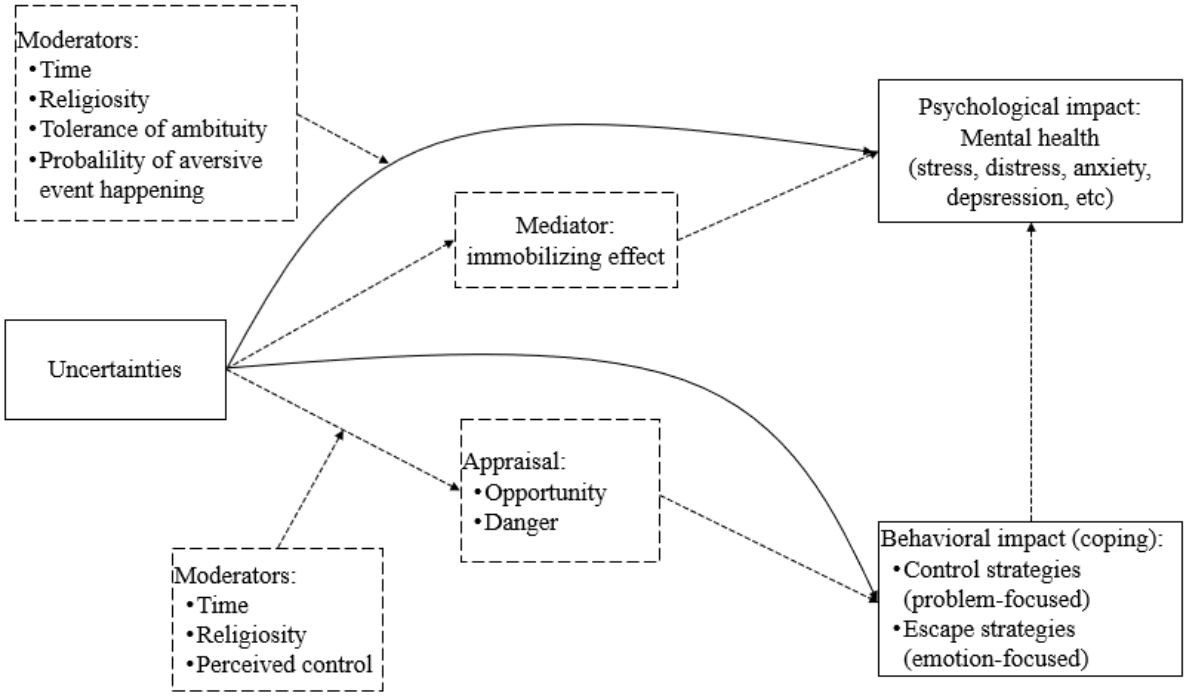
Figure 2. A Nomological Network of Research on Psychological and Behavioral Impacts of Involuntary Job Loss



Note 1. Dashed lines show relationships that lack empirical evidence (e.g., from theory paper or only supported by one paper) or theoretical reasoning (e.g., from purely statistical analysis such as a meta-analysis without theoretical basis).

Note 2. Double-arrow lines indicate correlational relationships.

Figure 3. A Nomological Network of Research on Uncertainties



Note. Dashed lines show relationships that lack empirical evidence (e.g., from theory paper, qualitative observations, or only supported by one paper) or theoretical reasoning (e.g., from purely statistical analysis without theoretical basis).

Figure 4. Qualitative Study Data Structure

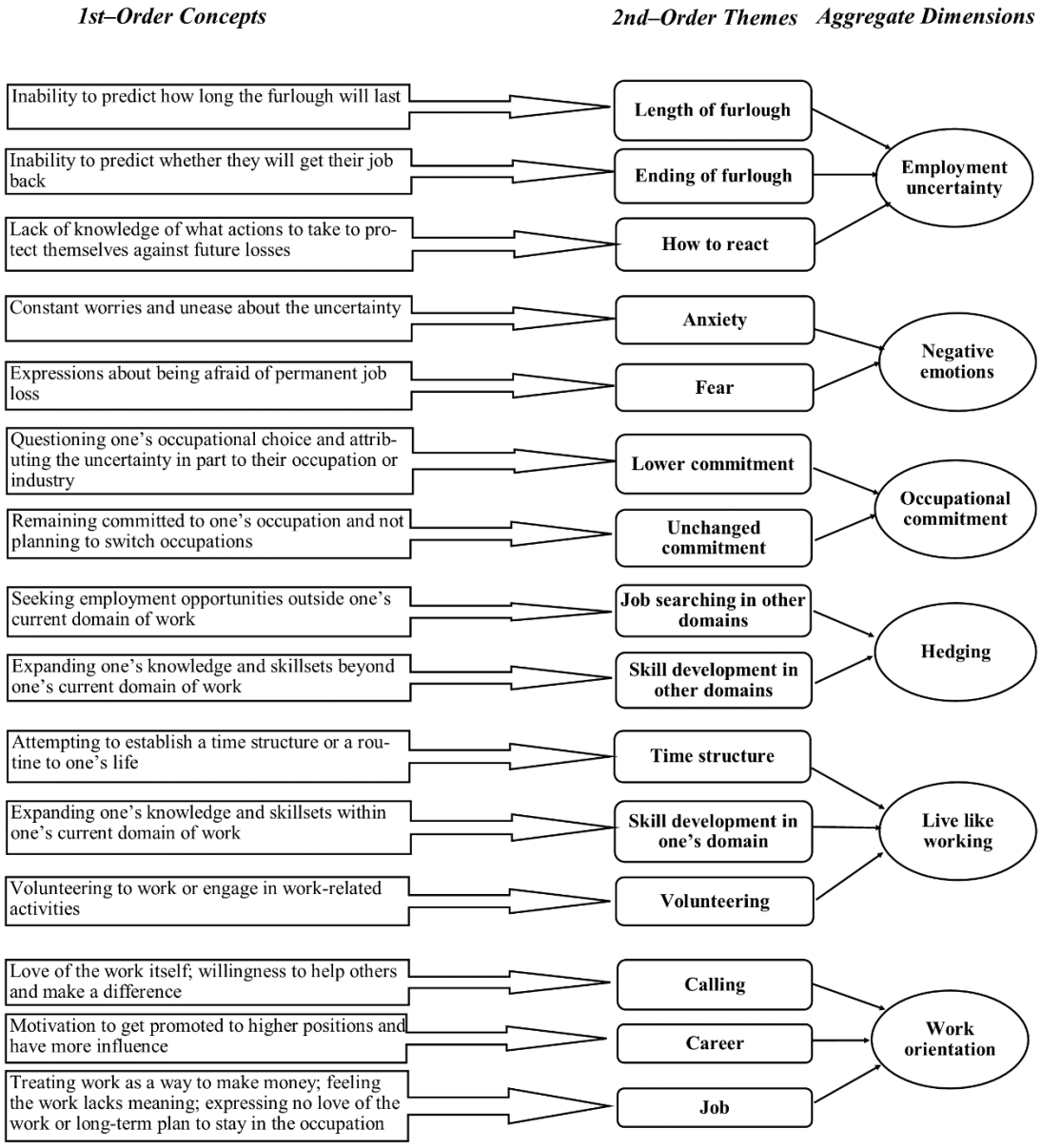
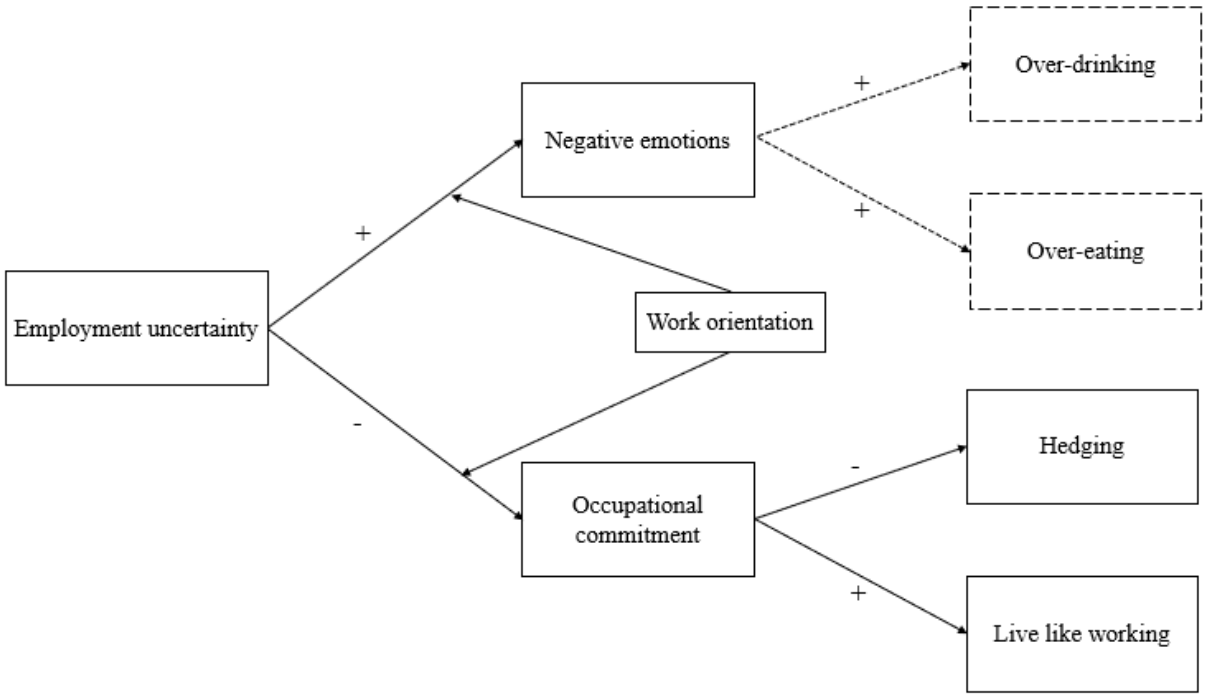


Figure 5. Conceptual Model



Note. Dashed boxes and arrows show relationships studied in the follow-up survey.

Figure 6. The Moderating Effect of Calling Orientation on the Relationship between Employment Uncertainty and Negative Emotions

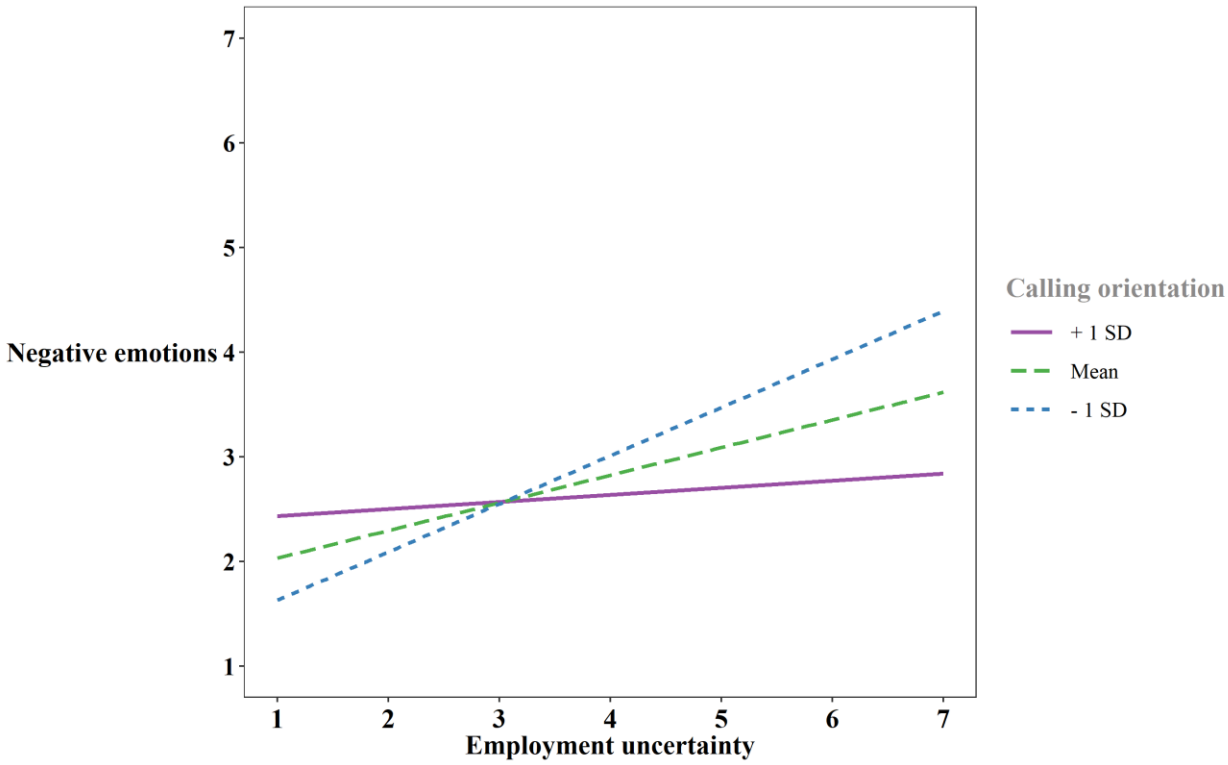


Figure 7. The Moderating Effect of Calling Orientation on the Relationship between Employment Uncertainty and Occupational Commitment

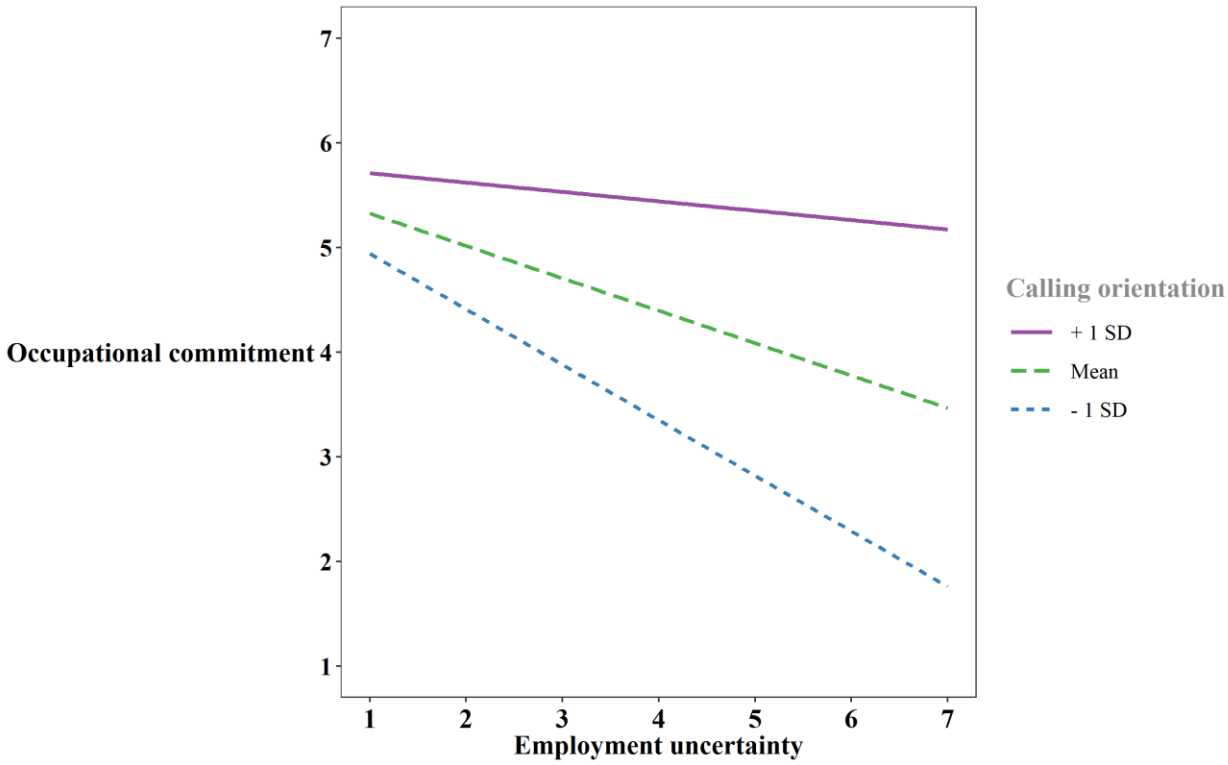
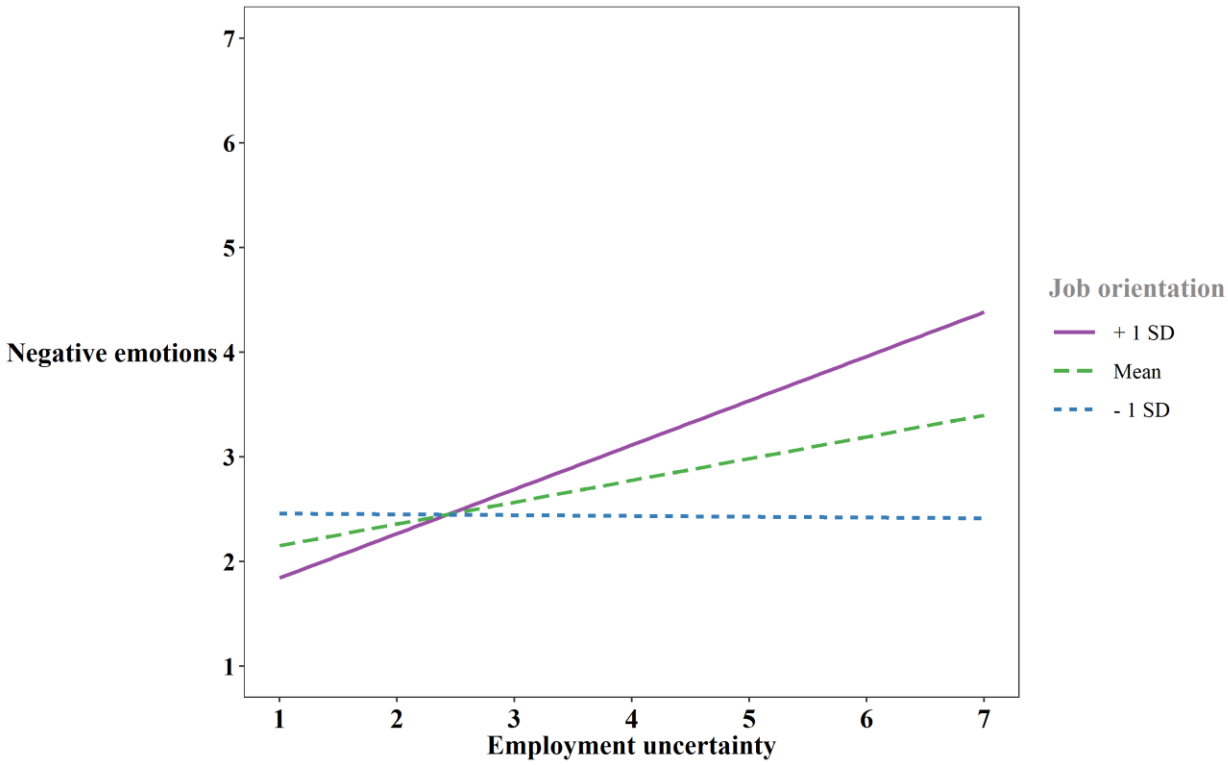


Figure 8. The Moderating Effect of Job Orientation on The Relationship between Employment Uncertainty and Negative Emotions



Appendices

APPENDIX 1. Appendix to Chapter 3

Interview Protocol

Materials Needed:

1. Tape recorder/Audio recording app
2. Note-taking materials

Introduction (2 minutes)

1. Introductions and brief summary of research.
2. Permission to tape record the interview.

Part 1: Personal Background and Information (3 minutes)

1. Tell us about yourself (educational background, previous work experience, tenure at the workplace before furlough, different positions held at the workplace, age).

Part 2: Feelings About the Work – Job vs. Career vs. Calling (5 minutes)

1. Describe what you did in your job before furlough.
2. When people ask you what you do for a living, what do you tell them?
3. Some people see their work as a means to make money (a job), some see it as a way to get promotions (a career), and some see it as a fulfilling and socially useful work (a calling). Which way did you see your work before furlough?

Part 3: Furlough process and first reactions (10 minutes)

1. Describe how you got the news that you were furloughed.
    a. How was the message communicated? What was the exact language/tone used? By whom?
    b. What kind of benefits were offered by the organization? Compensation? Medical insurance? Life insurance? Unemployment assistance?
    c. Do you have a guaranteed return to your job?
    d. When do you expect to go back to work?
2. How did you feel when you found out that you were furloughed?

a. What was your first thought/reaction?

b. Did you feel any emotions?

Part 4: Coping process (10 minutes)

1. How do you spend your time during furlough?
    a. How do you spend a usual day?
    b. Are you doing things related to your furloughed job, for example, volunteering?
    c. Do you miss anything of work? Do you hope to go back to work soon?
    d. Are you searching for new jobs or other ways to earn money?
    e. Have you already got a new job?
    f. Are you trying to learn new skills or going back to school?
    g. Is there anything that you would like to do but haven't done yet?
2. Has the furlough affected your feeling towards your work?
    a. Do you expect it to change after you get back to your work?
    b. Do you expect it to change if you ultimately lose your job?

Conclusion

1. Are there any additional thoughts you have had that you want to share?
2. Thank them for their time.

APPENDIX 2. Appendix to Chapter 4

Scales Used to Measure Variables in the Model, Control Variables, and Variables in the Follow-up Study.

Variables in the model:

Employment uncertainty (Ashford et al., 1989) **–** *Wave 2*

Thinking about the future, to what extent do you feel uncertain about the following events? Choose from 1 = not at all to 7 = extremely.

Lose your job and be moved to a lower level job within the organization?
Lose your job and be laid off for a short while?
Lose your job and be laid off permanently?
Find your department or division's future uncertain?
Lose your job by being fired?

Negative emotions (Watson et al., 1988) **–** *Wave 2*

To what extent have you experienced the following emotions during the period since you were furloughed? Choose from 1 = not at all to 7 = extremely

NA (fear, anxiety)

Scared
Afraid
Upset
Distressed
Jittery
Nervous

Occupational commitment (Meyer et al., 1993) **–** *Wave 2*

Choose the extent to which you agree with the following items, from 1 = strongly disagree to 7 = strongly disagree.

I regret having entered the profession where I was furloughed (R)
I am proud to be in my profession despite being furloughed
I do not identify with the profession I was furloughed from (R)
I am enthusiastic about the profession I was furloughed from

Hedging

Job searching (Kinicki & Latack, 1990) **–** *Wave 2*

How often did you engage in the following behavior during furlough? Choose from 1 = almost never to 7 = always

Focus my time and energy on job search activities
Devote a lot of time to looking for a new job
Talk with people who can help me find a job
Give it my best effort to find a new job

Live like working

Volunteering in the same domain – Wave 2

How often did you engage in the following behavior during furlough? Choose from 1 = almost never to 7 = always

Engage in unpaid work related to the work I was doing before furlough
Volunteer to solve a problem related to the work I was doing before furlough
Volunteer for a program/organization related to the work I was doing before furlough

Work orientation (Wrzesniewski et al., 1997) **–** *Wave 2*
Please read all three paragraphs below and then indicate how much you are like Mr. A, Mr. B, and Mr. C. on a scale from 1 = not at all like me to 7 = very much like me.

Mr. A works primary to earn enough money to support his life outside of his job. If he was financially secure, he would no longer continue with his current line of work, but would really rather do something else instead. Mr. A's job is basically a necessity of life, a lot like breathing or sleeping. He often wishes the time would pass more quickly at work. He greatly anticipates weekends and vacations. If Mr. A lived his life over again, he probably would not go into the same line of work. He would not encourage his friends and children to enter his line of work. Mr. A is very eager to retire.

Mr. B basically enjoys his work, but does not expect to be in his current job five years from now. Instead, he plans to move on to a better, higher level job. He has several goals for his future pertaining to the positions he would eventually like to hold. Sometimes his work seems a waste of time, but he knows that he must do sufficiently well in his current position in order to move on. Mr. B can't wait to get a promotion. For him, a promotion means recognition of his good work, and is a sign of his success in competition with his coworkers.

Mr. C's work is one of the most important parts of his life. He is very pleased that he is in this line of work. Because what he does for a living is a vital part of who he is, it is one of the first things he tells people about himself. He tends to take his work home with him and on vacations, too. The majority of his friends are from his place of employment, and he belongs to several organizations and clubs relating to his work. Mr. C feels good about his work because he loves it, and because he thinks it makes the world a better place. He would encourage his friends and children to enter his line of work. Mr. C would be pretty upset if he were forced to stop working, and he is not particularly looking forward to retirement.

Control variables:
Perceived psychological contract breach (Robinson & Morrison, 2000) – wave 1
To what extent do you agree with the following statements? Choose from 1 = strongly disagree to 7 = strongly agree.

Almost all the promises made by my employer during recruitment have been kept so far (reversed)
I feel that my employer has come through in fulfilling the promises made to me when I was hired (reversed)
So far my employer has done an excellent job of fulfilling its promises to me (reversed)
I have not received everything promised to me in exchange for my contributions
My employer has broken many of its promises to me even though I've upheld my side of the deal

Financial resources (Meuris & Leana, 2018)
How much total combined money did you earn last year? (recoded based on medians of selected ranges)

0 - $9,999
$10,000 - $24,999
$25,000 - 49,999
$50,000 - $74,999
$75,000 - $99,999
$100,000 - $124,999
$125,000 - $149,999
$150,000 - $174,999
$175,000 - $199,999
$200,000 and up

Alternative moderators:
Perceived sense of control (Lachman & Weaver, 1998) – wave 1
To what extent do you agree with the following statements? Choose from 1 = strongly disagree to 7 = strongly agree.

I can do just about anything that I really set my mind to
Whatever happens in the future mostly depends on me
When I really want to do something, I usually find a way to succeed at it
Whether or not I am able to get what I want is in my own hands.

Resilience (Campbell-Sills & Stein, 2007) – wave 1
To what extent do you agree with the following statements? Choose from 1 = strongly disagree to 7 = strongly agree.

I am able to adapt to changes
I see myself as a strong person
I am not easily discouraged by failure
I can stay focused under pressure
I can achieve goals despite obstacles

Follow-up study:
Work status
What is your current employment status?

Employed Full-Time (working 35 or more hours per week)
Employed Part-Time (working less than 35 hours per week)
Furloughed - Looking for work
Furloughed - Not looking for work
Laid off - Looking for work
Laid off - Not looking for work
Retired
Full-time student
Other, please specify: __

Furlough update
You indicated that you were furloughed at the time of the first-wave survey (late May 2020). What happened to the position from which you were furloughed?

I am still on furlough from that position
The position was removed/assigned to someone else and I was laid off
The position was kept for me and I went back to work
The position was kept for me but I chose not to take it

Furlough length
Please estimate the total length of your furlough since the time your furlough started. (choose number of weeks)

Current financial precarity *(worry about one's financial situation)* (Meuris & Leana, 2018)
Please rate the following questions about your financial situation **recently**. Please choose from 1 = never to 7 = always.

How often have you been worried about your financial situation?
How often have you felt satisfied with your financial situation? (R)
How often have you felt overwhelmed by your financial obligations?
How often do you feel that you do not have enough money?

Financial precarity during furlough (Meuris & Leana, 2018)
Please rate the following questions about your financial situation **during furlough**. Please choose from 1 = never to 7 = always.

How often have you been worried about your financial situation?
How often have you felt satisfied with your financial situation? (R)
How often have you felt overwhelmed by your financial obligations?
How often did you feel that you did not have enough money?

Depression (Orth et al., 2009; Radloff, 1977)
Below is a list of the ways you might have felt or behaved. Please choose how often you have felt this way on a typical week during your furlough. Choose from 1 = rarely to 7 = all of the time.

I did not feel like eating; my appetite was poor
I had trouble keeping my mind on what I was doing
I felt depressed
I felt that everything I did was an effort
My sleep was restless
I felt sad
I could not get "going"

Overdrinking (Saunders et al., 1993)
Please answer the following questions and choose from 1 = never to 7 = very often.
On a typical week during furlough,

How often have you found that you were not able to stop drinking once you had started?
How often have you failed to do what was normally expected from you because of drinking?

How often have you needed a first drink in the morning to get yourself going after a heavy drinking session?

Overeating (Liu et al., 2017)
Please think about what you have eaten on a typical week during your furlough. Indicate your level of agreement or disagreement with each statement (1 = strongly disagree to 7 = strongly agree)

I ate too many junk foods
I had too many unhealthy snacks
I ate and drank excessively
I had too many late-night snacks before going to bed