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# In the Eye of the Beholder: How Proactive Coping Alters Perceptions of Insecurity

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Why do some workers experience less insecurity than others even when facing the same objectively insecure work situation? Combining appraisal theory with the construct of proactive coping, we propose that proactive career behavior represents a form of resource accumulation that mitigates the extent to which insecure work situations result in perceived insecurity. We hypothesize that proactive career behavior moderates the effect of an acute insecure work situation (time remaining before contract expiration) and a chronic insecure work situation (probability of digitalization) on control appraisals of these situations and, in turn, perceptions of job and employment insecurity. We tested this moderated mediation model in a 3-wave field study with 2 samples. First, workers in unstable temporary jobs (with no renewed contract,  $N = 227$ ) perceived higher lack of control and hence higher job insecurity as their contract got closer to expiring. As hypothesized, this process was mitigated by proactive career behavior. Second, workers in stable jobs (with a renewed contract or a permanent contract,  $N = 205$ ) perceived higher lack of control and hence higher employment insecurity, as their occupation had a higher probability of digitalization. In contrast to our hypothesis, proactive career behavior did not mitigate this effect. Results further replicated established relationships between perceived insecurity and later stress and career dissatisfaction. By moving up the causal chain and focusing on the emergence of insecurity rather than the more common emphasis on consequences of insecurity, our study uncovers the role of proactive coping in the job insecurity process.

*Keywords:* proactive coping, job insecurity, employment insecurity, stress, career satisfaction

The world of work is rapidly changing. The number of temporary contracts is increasing, major industries are being disrupted by the latest wave of digital innovation, and more and more jobs are being replaced by machines (The Economist, 2016). Although these developments can be positive for organizations—they provide flexibility and reduce financial costs and risks—workers often have difficulties adapting to this new reality. Perhaps unsurprisingly in light of these developments, it is increasingly common for workers to experience uncertainty about the continuance of their

present job (i.e., job insecurity; Vander Elst, Richter, et al., 2014) as well as uncertainty about the stability of their future job or career (i.e., employment insecurity; Huang, Niu, Lee, & Ashford, 2012). Such perceptions of job and employment insecurity can have dire personal consequences: Meta-analyses show that workers who perceive high levels of insecurity have more stress, poorer health, and poorer career prospects (cf. Cheng & Chan, 2008; Sverke, Hellgren, & Näswall, 2002). As such, policymakers have highlighted insecurity as one of the major and most rapidly accelerating “psychosocial hazards” in the work place (cf. De Witte, Vander Elst, & De Cuyper, 2015; Schaufeli, 2016).

Research shows that the perception of insecurity results from a wide range of labor market conditions, such as technological changes and globalization (Jiang, Probst, & Sinclair, 2013), national labor market policies (Anderson & Pontusson, 2007), organizational change (Debus, König, & Kleinmann, 2014), and temporary employment (Keim, Landis, Pierce, & Earnest, 2014). Yet, perceived insecurity is not a predetermined response to these external factors. In fact, two workers facing the same objectively insecure work situation can experience different levels of insecurity and subsequent strain (Klandermans, Hesselink, & van Vuuren, 2010; Shoss, 2017). Yet, research that aims to explain such divergent individual responses has rarely focused on the process leading up to perceived insecurity. Instead, scholars tend to assume that feelings of insecurity are a “given” in insecure work situations: They often take perceived insecurity as the starting point (rather than the objective source of insecurity) and focus on

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how individuals respond to this perceived insecurity. This lack of theoretical and empirical attention to the emergence of perceived insecurity hinders the potential to disentangle the job insecurity process. For example, it remains unclear if some workers experience less strain than others because they are better equipped to cope with feelings of insecurity (which is the typical focus in insecurity research) or because they cope with the situation in such a way that they experience less insecurity in the first place (which we focus on in the current study).

In this study, we aim to uncover how objectively insecure work situations and individual proactive behaviors operate together to shape subjective perceptions of insecurity. We combine appraisal theory (Lazarus & Folkman, 1984) with the construct of proactive coping (Aspinwall & Taylor, 1997) to develop a theoretical perspective about the conditions under which workers appraise an objectively insecure work situation as a threat, and, hence, experience insecurity. Proactive coping refers to actions undertaken in advance of a potentially stressful event to prevent it or to modify its form before it occurs. When such an event is a possibility rather than an actuality—which is the case in insecure work situations—its full impact may be mitigated by proactive coping and thus never felt (cf. Aspinwall & Taylor, 1997). Here, we consider proactive career behavior as the most relevant form of proactive coping because this behavior involves building resources to master and change current career circumstances through self-initiated and future-oriented actions, for example, by career planning or network building (Grant & Parker, 2009; Parker, Bindl, & Strauss, 2010). We expect that engaging in these sorts of behaviors enables a person in an insecure work situation to feel more in control of that situation, thereby lowering their feelings of insecurity. To ensure that previous research replicates within our context, we also examine two key strain outcomes of perceived insecurity, notably stress and career dissatisfaction.

Importantly, we recognize that not all insecure work situations are the same but that these can be classified as either acute or chronic (Day & Livingstone, 2001; Shoss, 2018). Acute insecure situations are relatively proximal events, such as having a temporary contract that is about to expire, or exposure to imminent organizational downsizing. In contrast, chronic insecure situations are more distal events, such as a high probability of digitalization of one's type of job or having a suboptimal labor market position owing to a lack of skills. We expect that this acute or chronic

nature of the insecure work situation is likely to influence the specific type of insecurity that an individual might experience, notably insecurity about one's current job (job insecurity) and insecurity about the future of one's employment (employment insecurity), respectively. To this purpose, we examine one key acute insecure situation—little time left on an expiring temporary contract—and one key chronic insecure situation—the probability of digitalization of one's occupation. We examine how proactive career behavior mitigates the effects of these situations on control appraisals and on job and employment insecurity, respectively, which in turn influence stress and career dissatisfaction. Figure 1 shows the full research model.

Our proactive perspective on preventing the emergence of perceived insecurity makes several substantial contributions. First, although it is understood that perceived insecurity can result from a wide range of insecure work situations across national, organizational, and individual levels, it still remains unclear how different variables come together to shape perceptions of insecurity (Shoss, 2017, 2018). By examining how objectively insecure work situations and individual (proactive) behavior interact to affect perceptions of insecurity, we provide a piece of the puzzle that may help to explain why some workers experience less insecurity than others despite being in the same objective insecure situation.

Second, in a typical investigation of coping with insecurity, the focus is on decreasing the consequences of perceived insecurity rather than preventing its emergence. As such, the starting point in the job insecurity process is often the fully developed stressor, that is, perceived insecurity (Shoss, 2017). As Aspinwall and Taylor (1997) noted, such an approach means that proactive activities—that is, activities undertaken in advance of the fully developed stressor—go unstudied because the stressor itself defines the point of departure. Our approach, however, moves beyond perceived insecurity as a starting point and, instead, starts with exogenous measures of insecurity (i.e., “objective” variables that are not affected by other variables in the model; cf. Antonakis, Bendahan, Jacquart, & Lalive, 2010). Doing so allows us to reliably disentangle how perceived insecurity emerges from objectively insecure work situations and to uncover the role of proactive coping in the appraisal of potential stressors. As such, our study provides a more in-depth theoretical analysis and empirical examination of proactive coping in the appraisal process of insecure work situations.

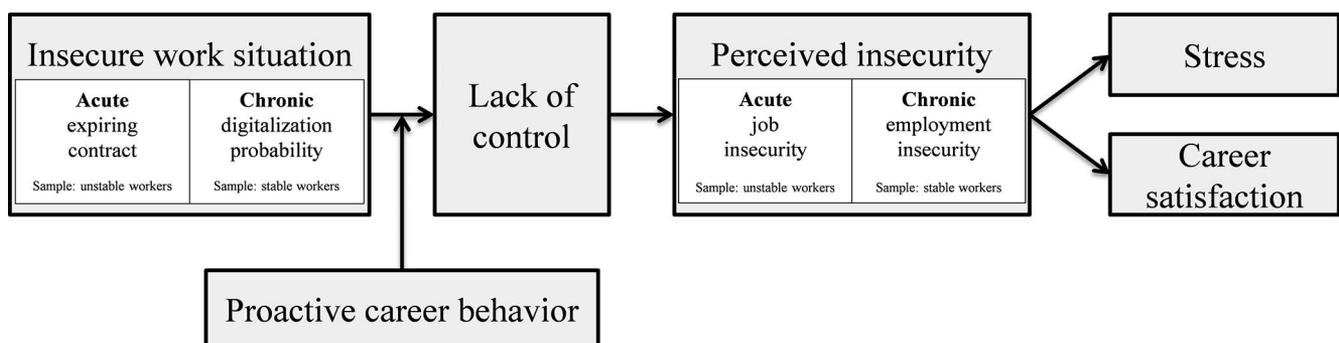


Figure 1. Proposed framework. Insecure work situations (expiring contract for workers in unstable jobs; digitalization probability for workers in stable jobs), lack of control, and proactive career behavior were assessed at Time 1, perceived insecurity at Time 2, and perceived stress and career satisfaction at Time 3.

Third, we move beyond previous research that displays workers as reactive agents who depend on organizations or societal regulations to provide security. By focusing on the cause of perceived insecurity rather than its consequences, we shift the focus from a symptom control approach—in which insecurity is a given—to a preventative approach in which feelings of insecurity can be prevented or lessened by workers themselves. Thus, we consider proactive behavior as part of the equation that shapes the emergence of perceived insecurity. From this perspective, workers can proactively take control over their work situation rather than respond to the situation as a given (Grant & Parker, 2009; Parker et al., 2010). As such, our results may help workers to “stay ahead” and improve their perceptions of security in the increasingly insecure labor market.

Fourth, we recognize that perceived job insecurity and perceived employment insecurity are theoretically distinct and are likely to arise from different types of insecure work situations. Bringing this “matching perspective” (cf. de Jonge & Dormann, 2006; Viswesvaran, Sanchez, & Fisher, 1999) into insecurity research, we argue that the nearing expiration date of one’s temporary contract represents an acute insecure work situation, which is relevant for workers without stable employment prospects (which we refer to as “workers in unstable jobs”), and can generate job insecurity in which they worry about the continuance of their job. We argue that the probability of digitalization of one’s type of occupation represents a more chronic threat, which is relevant for workers with stable employment prospects (which we refer to as “workers in stable jobs”), and can generate employment insecurity in which they worry about their future career perspectives. This “matching” follows from recent suggestions in the literature to recognize, consider, and measure appropriate different types of insecurity experienced by different groups of workers dealing with different types of insecure work situations (Huang, Lee, Ashford, Chen, & Ren, 2010; Huang et al., 2012; Lee, Bobko, & Chen, 2006; Vander Elst, De Witte, & De Cuyper, 2014). We believe that a distinction between job and employment insecurity makes it possible to better understand the processes that may explain when and how different forms of insecurity can emerge from different insecure work situations.

Finally, the distinction between workers in unstable jobs and workers in stable jobs has several theoretical and methodological benefits over the more common strategy of comparing temporary to permanent workers. Although we know from previous research that temporary workers report higher levels of perceived insecurity than permanent workers (Bernhard-Oettel, Sverke, & De Witte, 2005; Cheng & Chan, 2008; De Cuyper & De Witte, 2007; Keim et al., 2014; Parker, Griffin, Sprigg, & Wall, 2002; Sverke et al., 2002), such a simplistic comparison is rather crude given the heterogeneity of these groups (De Cuyper et al., 2008) and confounds other variables that tend to correlate with this distinction, such as age, occupational status, and national labor market policy (Shoss, 2017, 2018). Because we focus on time before contract expiration as the independent variable within the sample of workers with unstable jobs, and the possibility of digitalization as the independent variable within the sample of workers with stable jobs, we avoid such confounding. In addition, the distinction between temporary and permanent workers does not align well with our theoretical assumptions. That is, according to appraisal theory (Lazarus & Folkman, 1984), the appraisal of a situation

hinges upon its predictability. However, a temporary contract in itself is not necessarily unpredictable, just as a permanent contract is not necessarily predictable. For example, the future job of a temporary worker with a renewed contract is relatively stable and predictable, whereas the future employment of a permanent worker whose occupation is likely to be digitalized is relatively unstable and unpredictable. Therefore, we distinguish between temporary workers without a renewed contract (workers in unstable jobs) and temporary workers with renewed contracts and permanent workers (workers in stable jobs), and narrow attention to the key aspects that characterize the unpredictability and uncertainty of their respective work situations (Figure 1 and 2). Hence, our approach fits with the matching perspective described earlier and reduces the “noise” involved in any comparison of temporary and permanent workers.

### Theoretical Background and Study Hypotheses

To explain individual differences in perceived insecurity and subsequent strain, previous research has often drawn on appraisal theory (Lazarus & Folkman, 1984). Appraisal theory views appraisal as a two-stage process in response to external stressors and proposes that environmental factors will only lead to strain when an individual perceives a loss or threat. More specifically, the individual’s appraisal of an external situation determines the stress response, rather than the external situation itself. In a potentially stressful situation, therefore, individuals can appraise the situation as irrelevant, harmful, challenging, or threatening (primary appraisal) and evaluate their resources to cope with the demands of the situation (secondary appraisal). Such coping resources can be physical, social, psychological, behavioral, and/or material and determine the extent to which an individual experiences strain from a stressful situation.

### Focus of Existing Research

Using Lazarus and Folkman’s (1984) secondary appraisal as a theoretical backdrop, scholars have identified several coping resources that help to explain why some workers who experience job insecurity suffer more than other workers who also experience insecurity. Findings show that factors such as positive affectivity, employability, and perceived organizational justice can help workers to cope with perceptions of insecurity and experience less subsequent strain (for overviews, see Lee, Huang, & Ashford, 2018; Shoss, 2017). Although helpful, these studies have overlooked—both theoretically and empirically—a crucial step in the appraisal process: that of primary appraisal or whether the situation is appraised as irrelevant, harmful, challenging, or threatening.

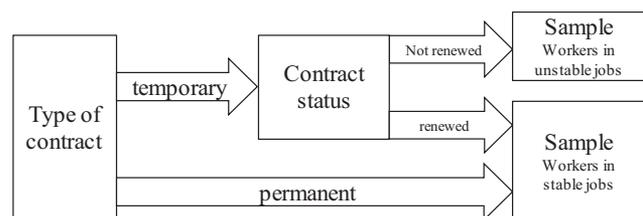


Figure 2. Overview of sample categorization.

This omission is surprising because insecurity scholars agree that workers within the same work context may differ in the extent to which they perceive job insecurity (De Witte et al., 2015; Sverke et al., 2002; Vander Elst, De Cuyper, Baillien, Niesen, & De Witte, 2016). Yet, there have been no empirical efforts to uncover how perceptions of job insecurity result from an individual's appraisal of the actual work environment. Instead, it is assumed that insecure work situations are appraised as threatening because such situations are difficult to control and because employees do not know what will happen in the future (Keim et al., 2014; Sverke et al., 2002; Vander Elst, Van den Broeck, De Cuyper, & De Witte, 2014).

The assumption in existing research that insecure work situations are by definition uncontrollable and thus threatening is troublesome because it ignores the fact that perceived insecurity is an interaction of objective and subjective factors (Keim et al., 2014; Sverke et al., 2002). Put differently, it obscures our understanding as to why some workers experience less insecurity than others even when facing the same insecure work situation. Here, to address this limitation, we move further up the causal chain and focus on how the appraisal of control—and, by extension, the perception of insecurity—is formed in the first place. To this purpose, we use exogenous variables (cf. Antonakis et al., 2010) to reflect two objectively insecure work situations: first, little time left on a temporary contract (an acutely insecure work situation) and, second, the probability of digitalization of one's occupation (a chronically insecure work situation). As such, this study has the potential to advance our understanding of workers' primary appraisal in the insecurity process and to disentangle how and when different objectively insecure work situations are also experienced as such.

### Primary Appraisal and the Role of Proactive Coping

A primary appraisal, that is, whether a situation is perceived as a loss, challenge, or threat, is shaped by a combination of person and situation factors (Folkman, 1984). One of the most important person factors to influence primary appraisal is the extent to which individuals believe they can control outcomes of importance. The higher such control beliefs, the less likely individuals are to appraise a situation as threatening. In highly ambiguous or unpredictable situations, however, cues about controllability tend to be minimal (Rotter, 1990). The greater the ambiguity or unpredictability of a situation, the more likely people are to appraise a situation as uncontrollable, and, hence, the more likely they are to experience the situation as a threat (Folkman, 1984; Lazarus & Folkman, 1984)—unless, as we propose here, workers proactively build resources to cope with insecure work situations.

More specifically, whereas Lazarus and Folkman's (1984) work on stress and coping concerns both the appraisal and coping responses to stressful encounters, later scholarly work has focused on coping strategies that precede the stressful encounter, that is, proactive coping (Aspinwall & Taylor, 1997; Stiglbauer & Batinic, 2015). Proactive coping involves building resources and acquiring skills that are not designed to address a particular experienced threat but, rather, to prepare in general given the recognition that threats do occur and that to be forearmed is to be well-prepared (Aspinwall & Taylor, 1997). In proactive coping, stressful situations have not yet occurred or have not progressed to threatening

levels. Thus, proactive coping occurs temporally before a fully developed stressor, it is anticipatory, and it requires the accumulation of resources, whereas reactive coping occurs after the stressor has fully developed, is a reaction to a threat, and involves the deployment of resources. By coping proactively—through emotions, thoughts and behaviors—people can tackle the stressor in its early stages rather than cope with the stressor in its full-blown state. As such, the traditional order of the stress and coping process is reversed: Proactive coping may serve to keep potential stressors under control by building resources that may lessen their impact (Aspinwall, 2011).

Aspinwall and Taylor (1997) defined several stages of the proactive coping process, in which resource accumulation and the recognition of potentially stressful situations is an important step in the initial appraisal of the situation: Once a potentially stressful situation has been detected, it must be appraised. Similar to appraisal theory, Aspinwall and Taylor recognized that people vary in the ways in which they appraise incipient stressful situations and noted that factors such as optimism and perceived control are associated with lower threat appraisals. Yet, with sufficient and appropriate resources, people are less likely to appraise a situation as uncontrollable. Here, we view proactive career behavior as an active behavior that builds such resources, consistent with the resource accumulation phase of proactive coping (Aspinwall & Taylor, 1997). As such, we propose that proactive career behavior influences the extent to which workers perceive control in insecure work situations and, thus, the extent to which they appraise an incipient stressful situation as threatening and experience insecurity. For example, although workers may recognize the potential insecurity of their work situation, they may be less likely to appraise this situation as uncontrollable when they have proactively been building resources that help them to alter the potential outcome of job loss (Stiglbauer & Batinic, 2015).

Proactive career behavior consists of four dimensions: career planning, skill development, career consultation, and networking (Claes & Ruiz-Quintanilla, 1998; Parker & Collins, 2010; Strauss, Griffin, & Parker, 2012). We hypothesize that proactive career behavior will mitigate the extent to which an insecure work situation results in appraisals of uncontrollability and, hence, the extent to which such a situation results in perceptions of insecurity. We base this hypothesis on the assumption that proactive workers have gathered information about their future work chances, have created new opportunities, and have been thinking ahead in terms of planning their career (Strauss et al., 2012). With more opportunities, knowledge and ownership regarding their work future, objectively insecure work situations will become less unpredictable and the outcome of job loss may be prevented. Workers engaging in proactive career behavior will, then, appraise the same insecure work situation as less uncontrollable than their less proactive counterparts, resulting in weaker perceptions of insecurity and, eventually, less strain. In the following text, we elaborate on how proactive career behavior can mitigate perceptions of insecurity in two key insecure work situations: time remaining on an expiring temporary contract for workers in unstable jobs and the probability of digitalization for workers in stable jobs.

### Acute Insecure Work Situation: Time Left Before Contract Expiration

The prevalence of temporary employment is an escalating phenomenon. For example, the share of temporary workers in Europe has grown by 25% in the past decade (Eurofound, 2015) to over 40% of the labor force (OECD, 2016). An expiring contract can be a highly unpredictable situation for temporary workers. With the contract approaching its end, the continuance of their job becomes less predictable and less controllable (De Witte et al., 2015), likely translating into a threat appraisal (Folkman, 1984; Lazarus & Folkman, 1984). The expiration date of a temporary contract is, in terms of unpredictability, most acute and most relevant for temporary workers with no further contract established because they lack knowledge about whether their job will be continued. For these workers in unstable jobs, we expect that the nearing end of their contract decreases their sense of control over the fate and future of their job, which should then increase their feelings of job insecurity, or “the subjectively perceived and undesired possibility to lose the present job in the future” (Vander Elst, Richter, et al., 2014; Vander Elst, Van den Broeck, et al., 2014). In sum, we propose that the following:

*Hypothesis 1a:* For workers in unstable jobs, the less time left before their temporary contract expires (time left before contract expiration), the greater their perceived lack of control and hence the greater their perceived insecurity.

Although the looming end to a contract may translate into a threat for workers in unstable jobs, we expect that their proactive career behavior can mitigate the perception of job insecurity arising from this situation. That is, we propose that when workers engage in proactive career behavior, they gain more knowledge about the future of their job and create opportunities to keep their job or find a comparable job. Put differently, they are accumulating resources that help them to manage the insecure work situation and prevent it from developing into a full stressor (cf. Aspinwall & Taylor, 1997). The insecure work situation will be less unpredictable for them, which mitigates the effects of time left before contract expiration on perceived lack of control and, hence, job insecurity. For example, by exploring career options and setting goals (career planning), workers not only gain information about the future of their job but also feel they are taking charge of their future. By increasing their knowledge and skills (skill development), workers can expand their job possibilities and increase their chances of getting hired. Likewise, by seeking advice from supervisors about their work prospects (career consultation), workers gain information about their prospects and signal that they want to remain in the organization, possibly increasing their chances on gaining a new contract before their current one expires. By talking to and building relationships with colleagues (networking), workers may increase their knowledge about the future of their job and enhance their chance to find existing comparable job opportunities. Together, these proactive career behaviors help workers in unstable jobs with expiring contracts to take control over their work situation, which will then mitigate the effects of the time left before contract expiration on their perceptions of control and hence job insecurity. We thus propose that the following:

*Hypothesis 2a:* For workers in unstable jobs, proactive career behavior will moderate the indirect relationship between time left before contract expiration and perceived job insecurity via perceived lack of control such that the relationship between time left before contract expiration and perceived lack of control will be weaker when proactive career behavior is high rather than low.

### Chronic Insecure Work Situation: Probability of Digitalization

Even workers in stable jobs—those who have a renewed contract beyond their present one or who have the security of a so called “permanent” employment contract—can experience feelings of insecurity (Kinnunen, Mauno, Natti, & Happonen, 1999). That is, in the absence of acute insecure work situations, they may start to experience uncertainty about the future of their work as a consequence of more chronic insecure work situations (Huang et al., 2012). For example, in their study of more than 700 different occupations, Frey and Osborne (2013) estimated that 47% of today’s jobs are susceptible to being digitalized. This changing technology at work might result in changing task demands, obsolescence of skills and/or positions, and even unemployment—thus leading to greater feelings of insecurity, especially among those whose type of occupations might be made redundant by the new technology (cf. Probst, Jiang, & Benson, 2018). In other words, the changing technology is likely to create uncertainty and unpredictability about the future of workers’ long-term career (Lee et al., 2018). We believe that this long-term probability of digitalization will be most relevant for workers who do not have to worry about the fate and future of their current job, that is, among workers with relatively stable employment prospects.

We hypothesize that workers whose type of occupation is more likely to be digitalized will be more likely to consider their work situation as difficult to control, given the unpredictability that looming distant future events generally entail. Although the abundant media—organizational—and policy attention on digitalization has made workers across the globe very aware of new technologies transforming the nature of work and of the extent to which their occupation may be vulnerable (Wike & Stokes, 2018), workers still have a lack of information about the potential consequences for the future of their careers due to the distal and abstract nature of digitalization (McClure, 2018). Without clear information about the future of their employment, workers in stable jobs whose occupation has a higher chance of digitalization are likely to appraise their work situation as difficult to control (cf. Folkman, 1984), which should then induce feelings of employment insecurity. Thus, we propose as follows:

*Hypothesis 1b:* For workers in stable jobs, digitalization probability of their occupation will positively predict perceived employment insecurity through perceived lack of control.

Consistent with our earlier theoretical arguments, we hypothesize that proactive career behavior can mitigate against the perceived lack of control that stems from a high probability of digitalization. To illustrate, by thinking ahead about what to do in the next few years of their careers (career planning), by developing skills and knowledge needed for future work life (skill development), by gaining knowledge about the training and experience

necessary to improve one's future work prospects (career consultation), and by building a network to determine what is expected in tomorrow's labor market (networking), workers may feel better informed and prepared for the potential consequences that may follow from digitalization of their occupation. They are building resources that can help them to reduce the severity of the potential threat (cf. *Aspinwall & Taylor, 1997*). Put differently, the consequences of digitalization for the fate and future of their career become less unpredictable, resulting in an appraisal of controllability over their work situation (*Folkman, 1984*). Thus, proactive career behavior can reduce the effect of a high probability of digitalization on workers' perceived lack of control, and, hence, their employment insecurity. We propose that the following:

*Hypothesis 2b:* For workers in stable jobs, proactive career behavior will moderate the indirect relationship between digitalization probability and perceived employment insecurity via perceived lack of control, such that the relationship between digitalization probability and perceived lack of control will be weaker when proactive career behavior is high rather than low.

### Consequences of Perceived Job and Employment Insecurity

As noted earlier, the perception of insecurity can have serious consequences for psychological stress and impaired well-being—regardless of its type or form (cf. *Cheng & Chan, 2008; De Witte et al., 2015; Ng & Feldman, 2014; Sverke et al., 2002*). Here, to replicate these findings within our specific context, we focus on the effect of perceived job and employment insecurity on perceived stress. Yet, although such stress-related symptoms are established outcomes of perceived insecurity, little research has considered the consequences of insecurity in the larger context of workers' careers. This is surprising, given that job and employment insecurity are undoubtedly career-related issues (*Shoss, 2018*). We believe that it is especially important to also incorporate outcomes of insecurity from a career-based perspective in the context of our study. After all, we reasoned that time left before contract expiration would be a relatively acute insecure situation for workers in unstable jobs—resulting in insecurity about one's current job—while the probability of digitalization would be a relatively chronic insecure situations for workers in stable jobs, resulting in insecurity about the future of one's employment. As such, as well as stress, we examine a career-related outcome (i.e., career satisfaction) as a consequence of job and employment insecurity. We believe that our efforts to replicate and extend earlier research in this regard contribute to the field, given that replications are considered to be the scientific gold standard and have recently been strongly recommended (*Jasny, Chin, Chong, & Vignieri, 2011; Kepes & McDaniel, 2013*). Thus, we propose the following:

*Hypothesis 3a:* For workers in unstable jobs, perceived job insecurity will be positively related to (a) perceived stress and negatively related to (b) career satisfaction.

*Hypothesis 3b:* For workers in stable jobs, perceived employment insecurity will be positively related to (a) perceived stress and negatively related to (b) career satisfaction.

## Method

### Design

Our hypothesized model has four important consequences for the design of our study. First, to examine the primary appraisal process with methodological rigor and to draw solid conclusions regarding the directional impact of insecure work situations on perceived insecurity, we modeled insecure work situations as exogenous variables (*Antonakis et al., 2010*). Second, given our focus on two different insecure work situations and their commensurate effects on different insecurities, we tested Hypotheses 1a, 2a and 3a among a sample of workers in unstable jobs and Hypotheses 1b, 2b and 3b among a sample of workers in stable jobs. Third, our hypothesized model implies sequential relationships and explicitly proposes that (a) proactive career behavior takes place temporally prior to perceived insecurity (*Aspinwall & Taylor, 1997*) and that (b) proactive career behavior mitigates, rather than results from, perceptions of control over one's work situation. This sequencing implies the value of a multiwave design. We thus conducted a three-wave study that examines the joint effect of proactive career behavior and the insecure work situation (Time 1) on perceived lack of control, and, in turn, perceived insecurity (Time 2), which then affects perceived stress and career satisfaction (Time 3). Fourth, we chose a 1-month time lag between measurements to coincide with the proposed underlying process because acute stressors (such as time left before contract expiration) operate quite rapidly (*Edwards, 1992*).

### Context

We conducted the study in a European country among employees of a multinational staffing organization that provides temporary and permanent placement services. Targeting employees of a staffing organization (rather than employees of one or more "regular" organizations) allowed us to better separate workers in unstable jobs from workers in stable jobs, and to disentangle insecure work situations from perceptions of insecurity. That is, temporary workers employed by a staffing organization can work in the same (or similar) job for years with multiple consecutive temporary contracts. As such, an expiring contract can be followed by a renewed contract in the same job, meaning that their job can remain the same while their current temporary contract may soon expire. This context reflects the reality of temporary workers and ensures that perceptions of job insecurity result from workers' current contract and are not tied to a specific job. In addition, this context ensured that workers in unstable jobs and workers in stable jobs were relatively similar and comparable because they were all employed by the same staffing organization in the same type of jobs.

### Sample and Procedure

After an institutional review board approval (2016-WOP-6685), a total of 4,653 employees were approached to participate in the study. Participants received three consecutive online questionnaires, each set 1 month apart. To enhance our response rate, participants received a digital coupon of €10 for a purchase in a

leading online store if they completed two questionnaires and of €15 if they completed three questionnaires.

**Overall sample.** A total of 906 employees (20.6%) completed the questionnaire at Time 1, from which 767 indicated that they were willing to participate in the follow-up study. Of those, 601 participants (78.4%) responded at Time 2, from which 476 participants (79.2%) were employed and 125 participants (20.8%) were unemployed. Participants who were unemployed at Time 2 were excluded from the study.<sup>1</sup> At Time 3, 432 (90.4%) participants filled out the questionnaire. The final overall sample of participants with complete data at all three time points ( $N = 432$ ) consisted of 62.3% women and 37.7% men. Participants' average age was 40.3 years ( $SD = 14.0$ ), and 33.5% had completed a high school degree, basic training degree, or vocational training degree, whereas 66.5% had a bachelor's or master's degree. The final overall sample was comparable with the total sample of approached employees, which consisted of 55% women and 45% men, with an average age of 37.0. In all, 36% of the sample had a high school degree, basic training degree or vocational training degree, and 59% had a bachelor's or master's degree.

**Dropout analyses.** To assess whether different types of individuals dropped out of the survey over time, we compared participants who only responded at Time 1 with those participants who responded to all three questionnaires. There were no significant differences between the groups in terms of gender,  $\chi^2(1) = .07$ ,  $p = .79$ , age,  $t(711) = -1.50$ ,  $p = .13$ , education,  $t(710) = -1.75$ ,  $p = .08$ , contractual hours per week,  $t(673) = .76$ ,  $p = .45$ , contract volition,  $t(522) = -1.57$ ,  $p = .12$ , time left before contract expiration,  $t(514) = -.31$ ,  $p = .76$ , digitalization probability,  $t(711) = .95$ ,  $p = .34$ , proactive career behavior,  $t(697) = 1.34$ ,  $p = .17$ , or perceived control,  $t(710) = -1.34$ ,  $p = .18$ . We believe that these findings suggest that "mortality" is unlikely to be a major problem for the current study.

**Workers in unstable jobs and workers in stable jobs.** In line with the matching perspective we adopted in this study (cf. de Jonge & Dormann, 2006; Viswesvaran et al., 1999), we created a sample of workers in unstable jobs and a sample of workers in stable jobs from the overall sample (Figure 2). To this purpose, we asked participants whether they currently had a temporary ("fixed-term") or a permanent ("open-ended") employment contract, after which the temporary workers also indicated whether they had secured a new contract and, if so, the contract's starting date. The latter was used to categorize the temporary workers either into the sample workers in unstable jobs, thus consisting of temporary workers without a renewed contract, or into the sample of workers in stable jobs, thus consisting of temporary workers with a renewed contract and permanent workers.

The sample of *workers in unstable jobs* comprised  $N = 227$  (52.5%) temporary workers. This sample consisted of 65.6% women and 34.4% men, with an average age of 38.5 years ( $SD = 12.7$ ), of which 31.1% had completed a high school degree, basic training degree, or vocational training degree, and 68.9% had completed a bachelor's or master's degree. The sample of *workers in stable jobs* comprised  $N = 205$  (47.5%) workers, of which  $N = 120$  (58.5%) temporary workers with a renewed contract and  $N = 85$  (41.5%) permanent workers. The total sample of workers in stable jobs consisted of 59.5% women and 40.5% men, with an average age of 41.4 years ( $SD = 15.3$ ), of which 36.3% had completed a high school degree, basic training degree, or voca-

tional training degree, and 63.7% had completed a bachelor's or master's degree.

Confirming our assumption that temporary workers with a renewed contract (i.e., in stable jobs) are more similar to permanent workers than to temporary workers without a renewed contract (i.e., in unstable jobs), we found that temporary workers in unstable jobs perceived less control,  $MD = -.28$ ,  $t(343) = -2.49$ ,  $p = .01$ , and experienced more job insecurity,  $MD = .47$ ,  $t(313) = 4.65$ ,  $p = .00$ , than temporary workers in stable jobs. These temporary workers in stable jobs did not differ from permanent workers regarding their perceived control,  $t(201) = -1.65$ ,  $p = .10$ , and their employment insecurity,  $t(203) = .74$ ,  $p = .46$ . In addition, there were very little demographic differences between the latter two subsamples, except that the subsample of temporary workers in stable jobs contained more women,  $\chi^2(1) = 6.2$ ,  $p = .02$ , and worked more hours per week ( $MD = 5.33$ ),  $t(183) = 2.76$ ,  $p = .01$ , than the subsample of permanent workers.

## Measures

Unless stated otherwise, we used 5-point Likert scales for all measures, ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Table 1 presents the scales' internal consistencies.

**Acute insecure work situation: Time left before contract expiration.** For the sample of workers in unstable jobs, this was measured as the time left before contract expiration, by assessing the number of months until participants' current temporary contract would expire.

**Chronic insecure work situation: Digitalization probability.** Participants were asked to indicate their type of occupation from a drop-down menu consisting of 30 occupational categories, such as health care, sales, and education. We calculated the probability of digitalization for each category using Frey and Osborne's (2013) ranking of occupations, which ranks 702 different occupations according to their technological potential for automation in the near future. However, Frey and Osborne's United States-based occupational classification system does not translate one-on-one to the European occupational classification system because the U.S. system is based on the Standard Occupational Classification, and the European system is based on the International Standard of Occupations. To align occupations from both classification systems, we followed a commonly used translation procedure using the Crosswalk table of the Bureau of Labor Statistics.<sup>2</sup> When there was no one-on-one alignment between occupations, we included a maximum of four representative U.S.-based occupations for the associated European-based occupation category. For example, the European occupation category "education" consisted of the U.S. occupations 'middle school teachers, except special and career/technical education', 'elementary school teachers', and 'adult basic and secondary education and literacy teachers and instructors'. Finally, we calculated the average digitalization of the representative occupations as listed by Frey and Osborne. As a validity check, we examined the correlations between this measure of digitalization probability and two potential correlates: gender and

<sup>1</sup> For both insecure workers and stable workers, the pattern of results is unchanged irrespective of whether we include or exclude these no longer employed participants in the sample.

<sup>2</sup> <https://www.bls.gov/soc/soccrosswalks.htm>.

Table 1  
Means, Standard Deviations, Internal Consistencies, and Correlations

Variables	M		SD																					
	Unstable <sup>a</sup>	Stable <sup>b</sup>	Unstable <sup>a</sup>	Stable <sup>b</sup>	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17			
1. Age	38.47	41.41	12.37	15.33	(-)																			
2. Gender <sup>c</sup>	1.66	1.60	0.48	0.49	-0.14*																			
3. Education <sup>d</sup>	3.79	3.62	0.99	1.08	-0.07																			
4. Contractual hours per week	26.90	24.59	12.22	13.07	-0.07																			
5. Contract violation	2.46	2.59	0.09	1.02	0.11																			
6. Time left before contract expiration	4.92	3.71	4.93	4.35	0.03																			
7. Digitalization probability	0.48	0.41	0.34	0.32	-0.20**																			
8. Proactive career behavior	3.27	3.13	0.68	0.71	-0.20**																			
9. Proactive career planning	3.14	2.96	0.85	0.91	-0.26**																			
10. Proactive skill development	3.65	3.44	0.77	0.86	-0.18**																			
11. Proactive career consultation	2.97	2.97	0.88	0.87	-0.09																			
12. Proactive networking	3.37	3.21	0.92	0.94	-0.04																			
13. Perceived lack of control	2.22	1.77	1.18	1.19	0.11																			
14. Perceived job insecurity	3.11	2.56	0.85	0.90	0.19**																			
15. Perceived employment insecurity	2.25	2.03	0.80	0.84	0.26**																			
16. Career satisfaction	3.22	3.36	0.73	0.74	-0.01																			
17. Perceived stress	2.36	2.26	0.49	0.51	-0.26**																			

Note. This correlation table represents correlations of two samples. The sample of workers in unstable jobs is represented below the diagonal. The sample of workers in stable jobs is represented above the diagonal. Internal consistencies are calculated across both samples.

<sup>a</sup> Sample of workers in unstable jobs (N = 227). <sup>b</sup> Sample workers in stable jobs (N = 205). <sup>c</sup> Categories include 0 = female, 1 = male. <sup>d</sup> Categories include 1 = high school, 2 = basic training, 3 = vocational training, 4 = bachelor, 5 = master. <sup>e</sup> p < .05 (2-tailed). <sup>\*\*</sup> p < .01.

education. Previous research shows that male workers, and workers with lower levels of education, tend to have types of occupations that are more likely to be replaced by machines (Arntz, Gregory, & Zierahn, 2016). Results (Table 1) supported this assumption and showed that a higher digitalization probability was positively correlated with being male ( $r = .20^{**}$ ) and was negatively correlated with level of education ( $r = -.15^{**}$ ).

**Proactive career behavior.** Proactive career behavior was assessed with a 13-item scale previously used by Strauss et al. (2012) and Claes and Ruiz-Quintanilla (1998). This scale contains the four subdimensions of proactive career behavior. Career planning (four items, e.g., “I am planning what I want to do in the next few years of my career”) and career consultation (three items, e.g., “I initiate talks with my supervisor about training or work assignments I need to develop skills that will help my future work chances”) were assessed with items taken from the Bachman, O’Maley, and Johnston (1978) scale and reworded to reflect present behavior. Skill development (three items, e.g., “I develop skills which may not be needed so much now, but in future positions”) and networking (three items, e.g., “I am building a network of contacts or friendships to provide me with help or advice that will further my work chances”) were assessed with Penley and Gould’s (1981) scale and included one additional item added by Strauss et al. (2012).

**Perceived lack of control.** To assess participants’ perceived lack of control over their work situation, we used a question from the Survey of Midlife Development in the United States (cf. Johnson and Krueger [2006]). Participants were asked “How would you rate the amount of control you have over your work situation these days?”. Items were rated from 1 (*no control at all*) to 5 (*a lot of control*) and then recoded such that higher numbers reflected higher perceived lack of control.

**Perceived job insecurity.** Perceived job insecurity was assessed with Vander Elst, De Witte, et al.’s (2014) four-item scale. An example item is “I think I might lose my job in the near future.”

**Perceived employment insecurity.** Perceived employment insecurity was assessed with Caplan, Cobb, French, Harrison, and Pinneau’s (1975) four-item scale. Participants were asked to rate how certain they had felt in the past month about the future of their career with items such as “whether your job skills will be valued 5 years from now,” ranging from 1 (*very uncertain*) to 5 (*very certain*).

**Perceived stress.** Perceived stress was assessed with Cohen, Kamarck, and Mermelstein’s (1983) 10-item scale. Participants had to indicate how often they had experienced stress-related symptoms in the past month (e.g., “In the last month, how often have you felt nervous and ‘stressed’?”) on a scale ranging from 1 (*never*) to 5 (*always*).

**Career satisfaction.** Career satisfaction was assessed with Greenhaus, Parasuraman, and Wormley’s (1990) five-item scale. Participants were asked to rate how they had felt in the past month about items such as “I am satisfied with the success I have achieved in my career.”

**Demographic and control variables.** Researchers have identified various variables that should be controlled for in analyses that involve temporary and permanent workers. Following De Cuyper et al. (2008), we included gender, age, contractual hours per week, and level of education to reflect the objective heterogeneity of workers. Meta-analytical evidence suggests that these variables are correlated with different types of insecurity (cf. Cheng & Chan, 2008; Sverke et al., 2002). Level of education was operationalized as participants’

highest completed degree, ranging from 1 (*high school*), 2 (*basic training*), 3 (*vocational training*), 4 (*bachelor degree*) and 5 (*master degree*). To also control for the subjective heterogeneity of temporary workers and to ensure that our findings were not influenced by participants’ preference for a temporary contract, we assessed contract volition with Bernhard-Oettel, Rigotti, Clinton, and de Jong’s (2013) four-item scale. An example item is “My current employment contract is the one that I prefer.”

## Results

Table 1 presents the means, standard deviations, and correlations between all variables in this study for workers in unstable jobs and for workers in stable jobs.

### Preliminary Analyses

Before testing our hypotheses, we evaluated the construct validity of the scales of perceived control, job insecurity, and employment insecurity to demonstrate that these are both theoretically and empirically different constructs. Confirmatory factor analysis in IBM SPSS AMOS 23.0 supported the construct validity of these measurements. First, results showed that perceived control, job insecurity, and employment insecurity were separate constructs (Vander Elst, De Cuyper, & De Witte, 2011). That is, we compared the hypothesized three-factor model (i.e., a model in which the items of perceived control, job insecurity, and employment insecurity loaded on their respective latent factor) to a common-factor model (i.e., a model in which all items loaded on one latent factor) and to two two-factor models (i.e., two models in which perceived control either loaded on the latent factor of job insecurity or loaded on the latent factor of employment insecurity). The three-factor model showed an acceptable fit,  $\chi^2/df = 5.73$ ,  $p = .00$ , normed fit index (NFI) = .93, comparative fit index (CFI) = .94, root mean square error of approximation (RMSEA) = .09, and fitted the data significantly better than the common-factor model,  $\Delta\chi^2(2) = 207.93$ ,  $p = .00$ , or any of the two-factor models,  $\Delta\chi^2(1) = 33.68$ ,  $p = .00$ , for perceived control loading on job insecurity and  $\Delta\chi^2(1) = 20.06$ ,  $p = .01$  for perceived control loading on employment insecurity. Second, results supported the four-dimension structure of proactive career behavior. That is, a four-factor model of proactive career behavior yielded a good fit,  $\chi^2/df = 3.12$ ,  $p = .00$ , NFI = .95, CFI = .97, RMSEA = .06, and fitted the data significantly better than a common-factor model,  $\Delta\chi^2(6) = 1098.38$ ,  $p = .00$ . As such, we have additionally conducted exploratory analyses on the subdimensions of proactive career behavior in further analyses.

### Hypotheses Testing

To examine Hypotheses 1a, 2a, and 3a, we tested our full hypothesized model among workers in unstable jobs, using path modeling in IBM SPSS AMOS 23.0. To examine Hypotheses 1b, 2b, and 3b, we tested our full hypothesized model among workers in stable jobs. The structure among variables was similar across both models. Both models included age, gender, education, and contractual hours per week as control variables. The model for workers in unstable jobs also included contract volition as a control variable; the model for workers

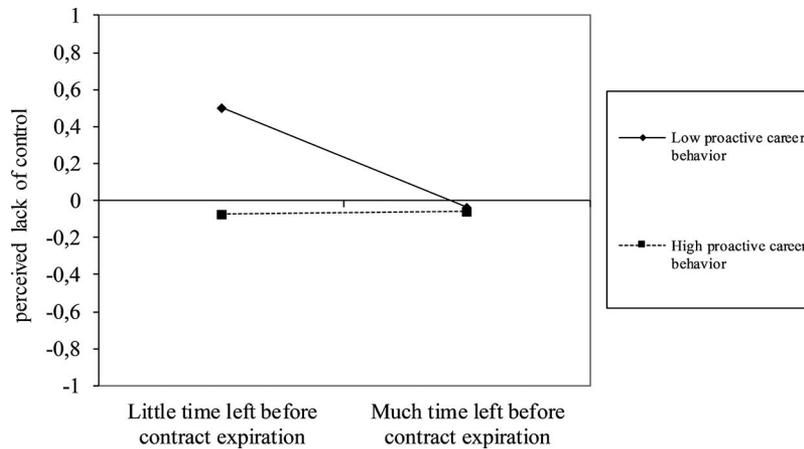


Figure 3. Interaction effect between the insecure work situation (time left before contract expiration) and proactive career behavior on perceived lack of control among workers in unstable jobs. Proactive career planning and career consultation yield similar interaction effects. Figures are available from the first author upon request.

in stable jobs also included type of contract (temporary vs. permanent) as a control variable.<sup>3</sup>

**Acute insecure work situation: Time left before contract expiration.** The hypothesized model showed an excellent fit,  $\chi^2/df = 1.19$ ,  $p = .21$ , CFI = .98, RMSEA = .02. Results showed that less time left before contract expiration was related to higher perceived lack of control ( $Est_{std} = -.14$ ,  $p = .03$ ) and that higher perceived lack of control was related to higher perceived job insecurity ( $Est_{std} = .40$ ,  $p < .01$ ). Next, the relationship between time left before contract expiration and perceived lack of control was moderated by proactive career behavior ( $Est_{std} = -.15$ ,  $p = .01$ ; Figure 3). Bootstrapping analyses showed that an indirect effect of time left before contract expiration on perceived job insecurity was not significant ( $b = .01$ ,  $SE = .02$ , 95% confidence interval [CI:  $-.06$ ,  $.04$ ]), but that, as expected, the proposed moderated mediation was significant. Specifically, the indirect effect of time left before contract expiration on perceived job insecurity via perceived lack of control was significant at one *SD* below the mean ( $b = -.06$ ,  $SE = .04$ , 95% CI [ $-.16$ ,  $-.01$ ]), but was no longer significant at the mean or at one *SD* above the mean (Table 2). Thus, when workers engage in average to high proactive career behavior, time left before contract expiration does no longer affect their perception of job insecurity through their perceived lack of control. Finally, job insecurity was positively related to perceived stress ( $Est_{std} = .23$ ,  $p < .01$ ) but unrelated to career satisfaction ( $Est_{std} = -.07$ ,  $p = .36$ ). Altogether these results provide support for Hypotheses 1a and 2a, and partial support for Hypothesis 3a.

**Chronic insecure work situation: Digitalization probability.** The hypothesized model showed a good fit,  $\chi^2/df = 2.28$ ,  $p = .00$ , CFI = .93, RMSEA = .08. Results revealed that a high probability of digitalization was related to higher perceived lack of control ( $Est_{std} = .18$ ,  $p = .02$ ) and that higher perceived lack of control was related to higher perceived employment insecurity ( $Est_{std} = .54$ ,  $p < .01$ ). Bootstrapping analyses showed that this hypothesized indirect effect of digitalization probability on perceived employment insecurity was significant at the 95% CI,  $b = .05$ ,  $SE = .02$ , 95% CI [ $.01$ ,  $.09$ ]. However, the results revealed no

interaction effect between digitalization probability and proactive career behavior on perceived lack of control ( $Est_{std} = .02$ ,  $p = .80$ ). Finally, higher employment insecurity was related to higher stress ( $Est_{std} = .27$ ,  $p < .01$ ) and to lower career satisfaction ( $Est_{std} = -.39$ ,  $p < .01$ ). Together, these results provide full support for Hypotheses 1b and 3b, but do not confirm Hypothesis 2b.

## Exploratory Analyses

**Dimensions of proactive career behavior.** We conducted exploratory analyses to ascertain the moderating role of the subdimensions of proactive career behavior separately. For time left before contract expiration, these analyses showed that career planning ( $Est_{std} = .14$ ,  $p = .03$ ) and career consultation ( $Est_{std} = .11$ ,  $p = .04$ ) moderated the relationship between time left before contract expiration and perceived lack of control, whereas skill development and networking did not moderate this relationship ( $Est_{std} = .09$ ,  $p = .07$  and  $Est_{std} = .07$ ,  $p = .23$ , respectively). Mirroring the results of the main analyses, the indirect effect of time left before contract expiration on perceived job insecurity via perceived lack of control was significant at 1 *SD* below the mean ( $b = -.06$ ,  $SE = .04$ , 95% CI [ $-.16$ ,  $-.01$ ]; career planning:  $b = -.08$ ,  $SE = .04$ , 95% CI [ $-.18$ ,  $-.01$ ]; career consultation:  $b = -.06$ ,  $SE = .03$ , 95% CI [ $-.15$ ,  $-.01$ ]), but was no longer significant at the mean or at 1 *SD* above the mean.

For digitalization probability, results showed no moderating effect of any of the subdimensions of proactive career behavior on the relationship between digitalization probability and perceived lack of control. In addition, bootstrapping analyses showed that none of the subdimensions moderated the indirect relationship between digitalization probability and employment insecurity via perceived lack of control. These results are in line with the results of our main analyses, which showed that there was no interaction

<sup>3</sup> Post-hoc analyses showed that results for both hypothesized models were similar with and without including the control variables.

Table 2  
*Bootstrapping Results for Tests of Moderated Mediation and Conditional Indirect Effects of the Insecure Work Situation (Time Left Before Contract Expiration) on Perceived Job Insecurity Among Workers in Unstable Jobs, at Different Values of Proactive Career Behavior and Its Subdimensions*

Moderator	Index/effect	SE <sub>Boot</sub>	LLCI <sub>Boot</sub>	ULCI <sub>Boot</sub>
Proactive career behavior				
Moderated mediation	.07**	.03	.02	.15
Indirect effect at -1 SD	-.06**	.04	-.16	-.01
Indirect effect at Mean	.00	.02	-.04	.05
Indirect effect at +1 SD	.07	.04	-.01	.15
Proactive career planning				
Moderated mediation	.07**	.03	.02	.14
Indirect effect at -1 SD	-.08**	.04	-.18	-.01
Indirect effect at Mean	-.02	.02	-.06	.03
Indirect effect at +1 SD	.05	.03	-.01	.12
Proactive skill development				
Moderated mediation	.04	.03	-.00	.12
Indirect effect at -1 SD	-.04	.04	-.14	.01
Indirect effect at Mean	-.00	.03	-.05	.05
Indirect effect at +1 SD	.04	.04	-.03	.12
Proactive career consultation				
Moderated mediation	.06**	.03	.01	.13
Indirect effect at -1 SD	-.06**	.04	-.15	-.01
Indirect effect at Mean	-.00	.02	-.05	.05
Indirect effect at +1 SD	.05	.04	-.03	.13
Proactive networking				
Moderated mediation	.03	.03	-.01	.11
Indirect effect at -1 SD	-.03	.04	-.12	.02
Indirect effect at Mean	-.00	.03	-.06	.05
Indirect effect at +1 SD	.03	.05	-.07	.12

Note. LLCI = lower limit confidence interval; ULCI = upper limit confidence interval.  
 \*\* values are significant at the 95% bias-corrected confidence interval.

effect between digitalization probability and proactive career behavior.

**Multigroup comparisons.** To validate our assumption that an expiring temporary contract does not represent an insecure work situation for temporary workers in stable jobs, we also tested Hypotheses 1a, 2a and 3a within this subsample. For them, time left before contract expiration should not cause a lack of control and subsequent feelings of job insecurity. Multigroup comparisons between temporary workers in unstable jobs and in stable jobs revealed that the fit of both models did not significantly differ,  $\Delta\chi^2(28) = 35.37, p = .16$ , while the path coefficients did: The model for temporary workers in stable jobs showed no significant relationship between time left before contract expiration and perceived lack of control ( $Est_{std} = -.02, p = .84$ ), no significant relationship between time left before contract expiration and perceived job insecurity ( $Est_{std} = .01, p = .89$ ), and no interaction effects with proactive career behavior or any of its subdimensions. These results indicate that time left before contract expiration is unrelated to perceived lack of control when temporary workers already have secured a new contract, supporting our choice to differentiate between temporary workers in unstable jobs and in stable jobs.

**Discussion**

Using a three-wave design involving two groups of workers, our study examined how workers proactively cope with the insecuri-

ties that arise in the labor market. We showed that insecure work situations are not necessarily threatening; rather, workers' appraisals of control in such insecure situations—and, by extension, their feelings of insecurity—depend on their proactive coping efforts. Specifically, results showed that proactive workers whose temporary contract was close to expiring did not experience the same degree of uncontrollability and job insecurity as their less proactive counterparts. However, engaging in proactive career behavior did not reduce the uncontrollability and subsequent employment insecurity for workers who were facing possible digitalization of their occupation. In sum, by engaging in proactive career behavior, workers may be able to mitigate against some insecure work situations, which can help them to experience less insecurity and less stress. Yet, such proactivity is not a panacea for all insecure situations.

**Theoretical Implications**

The results of this study provide an integrative understanding of the effects of different insecure work situations and, as such, make several contributions to the literature. First, our focus on buffering the emergence of insecurity moves beyond the secondary appraisal stage of the stressor-strain explanation typically invoked in the insecurity literature (De Cuyper et al., 2008; Sverke et al., 2002). By uncovering the role of proactive coping in the primary appraisal stage, we showed that the relationship between insecure work situations and perceived insecurity is less deterministic than

often assumed. Instead, we draw attention to the possibility that workers can be active agents in creating their own security, rather than reactive respondents to their environment. As such, we shift the focus from a symptom control approach—in which feelings of insecurity are taken as a given—to a proactive approach in which feelings of security can be created by workers themselves.

Second, our approach offers a theoretical explanation for the impact of objectively insecure work situations on workers' subjective perceptions of insecurity. Although previous research has highlighted lack of control as a possible cause or even core element of perceived insecurity (Ashford, Lee, & Bobko, 1989; Keim et al., 2014; Sverke et al., 2002; Vander Elst, Van den Broeck, et al., 2014), as a mediator in the relationship between perceived insecurity and strain (Vander Elst, Richter, et al., 2014; Vander Elst et al., 2011), or as a moderator in the relationship between perceived insecurity and its strain (cf. Shoss, 2017), we have now provided empirical support for the role of control in the primary appraisal process. This does not mean, however, that perceptions of control do not influence secondary appraisal as well. In fact, according to Folkman (1984), control can influence both primary appraisal and secondary appraisal: Control in primary appraisal involves factors that influence the appraisal of a potentially stressful situation as threatening, whereas control in secondary appraisal refers to cognitive and/or behavioral efforts to seek control in that threatening situation. We showed that proactively building resources can alter the extent to which workers perceive control in insecure work situations and, thus, the extent to which they appraise such a situation as threatening and experience insecurity. As such, this study adds to our understanding of the crucial role of control in the overall appraisal process.

Third, by focusing on how environmental situations and individual factors come together to shape perceptions of insecurity, we were able to uncover why some workers experience less insecurity than others in response to the same insecure work situations. Drawing on primary appraisal rather than secondary appraisal (Lazarus & Folkman, 1984), we moved up the causal chain and showed that proactive behavior can be part of the equation that shapes the emergence of feelings of insecurity. We should note, however, that the behaviors examined in this study (e.g., career planning, skill development) may also function as a more reactive coping strategy, given that there is an overlap between appraisal and coping (cf. Folkman, 1984). In that case, these behaviors would reflect coping behavior that is part of secondary appraisal, that is, buffering the negative consequences of perceived insecurity rather than mitigating its emergence. Although theoretically possible, our current results did not support this assumption.<sup>4</sup> In fact, we found that proactive career behavior shaped the primary appraisal process through control perceptions. In that sense, we have uncovered the added value of proactive coping in the insecurity process: not as a coping response that follows from feelings of unpredictability and uncontrollability (Edwards, 1992; Fay & Sonnentag, 2002; Shoss, 2017), but the other way around—as behavior that can help to make insecure work situations feel less unpredictable and uncontrollable.

Fourth, our results point out that different types of insecure work situations may require different proactive coping efforts. That is, we found that proactive career behavior did mitigate feelings of job insecurity invoked by an expiring temporary contract, but did not mitigate feelings of employment insecurity invoked by digita-

lization. These findings signal that it might be that proactive career behavior is better suited to overcome acute insecure work situations, while it cannot overcome chronic insecure work situations such as outsourcing and digitalization. After all, the digitalization of occupations means that there will be fewer jobs in that type of occupation, irrespective of individual action. No amount of proactive career behavior would, then, change the negative consequences of a disappearing occupation. Alternatively, workers' threat appraisals of digitalization may depend on their technological skills rather than on their proactive career behavior. That is, compared to workers with strong technological skills, workers with weak technological skills may be more likely to appraise digitalization as a threat. Technological skill development may therefore be a more appropriate form of proactive coping than the general proactive skill development we currently assessed. Yet, currently, we do not know what sorts of behavioral responses, if any, can mitigate against the feelings of insecurity that arise from digitalization.

On a similar note, chronic insecure work situations might require longer-term strategies executed over considerable periods of time (e.g., transitioning to a new occupation; obtaining a new educational degree), whereas acute insecure work situations might require more immediate proactive behavior. Exploratory analyses showed that particularly career planning and career consultation were the most important forms of proactive career behavior for mitigating the feelings of job insecurity invoked by an expiring contract, in contrast to skill development and networking. It is likely that career planning and career consultation are behaviors more proximal and immediate to one's current job and, hence, fit better with reducing perceived job insecurity caused by an acute insecure work situation. Unfortunately, the concept of proactive career behavior currently does not distinguish between proactive actions that are more immediate in focus (e.g., talking to a supervisor about opportunities) from those that are more long-term and distal (e.g., building networks). We believe, however, that such a distinction would be worthwhile to explicitly examine in the future, perhaps by further developing the measures of proactive career behavior. Only then, we can really unpack for different types of insecure work situations what type of proactive coping can help to prevent the emergence of insecurity and its negative consequences.

## Practical Contributions

Next to its theoretical contributions, our study delivers some clear implications for practice and policy. The finding that insecure work situations are problematic because they can cause a lack of control provides a practical point of departure. That is, rather than using a symptom control approach by attempting to buffer against the consequences of insecurity, the perception of insecurity can also directly be reduced by tailored proactivity interventions that increase perceived control in insecure work situations. Research that may be useful in this regard are Glaub, Frese, Fischer, and Hoppe's (2014) personal initiative training and Strauss and Park-

<sup>4</sup> Results of supplementary analyses showed no significant interactions between perceived job insecurity and proactive career behavior on stress and career satisfaction, nor between perceived employment insecurity and proactive career behavior on stress and career satisfaction.

er's (2018) proactive skill development training. Both of these studies show that it is possible to increase people's proactive behavior through carefully designed interventions.

Next to individual-level interventions, higher level policy is also needed. According to Berglund (2015), labor market policies have the potential to reduce perceived job insecurity. That is, investments in social protection are associated with reduced levels of job insecurity. Next to such "passive" labor market policies, however, "active" labor market policies can also be relevant for reducing insecurity. We therefore argue for a joint approach: one in which workers' (proactive) resources are trained to fit the demands of the labor market, and in which jobs are created and/or subsidized to decrease workers' objective insecurity.

Lastly, we believe that the insecure work situations that cause insecurity are likely to be omnipresent in our future labor market. It is thus important that workers are able to deal with those insecure work situations and prevent its negative consequences. Our study offers a crucial insight in that regard: In some insecure situations, feelings of insecurity may be lessened or averted when workers engage in proactive career behavior. This reasoning may help workers and policymakers to create security in the increasingly insecure labor market.

### Limitations and Future Research Directions

One limitation of our study is that we used a single-item measure of perceived lack of control. Although single-item measures are typically discouraged, we believe that our operationalization of perceived lack of control is a noncomplex, narrow and unambiguous construct (cf. Wanous, Reichers, & Hudy, 1997). In addition, despite our use of three waves and exogenous operationalization of insecure work situations—which minimizes the threat of common method bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003)—our design is correlational and involved self-report measures.

It is important to note that the design of our study does not allow us to disentangle the full complexity of the proactive coping framework as outlined by Aspinwall and Taylor (1997). For example, it is possible that workers already experienced some level of insecurity at the first measurement moment or that feelings of insecurity may have developed parallel to the objectively insecure work situation. From a conceptual perspective, proactive career behavior in response to incipient feelings of insecurity are still considered to be proactive coping, given the assumption that proactive coping can both prevent the occurrence of stressors and inhibit further development of incipient stressors. Yet, from an empirical perspective, our study cannot uncover whether proactive career behavior indeed inhibited the further development of insecurity among workers in insecure work situations. On a similar note, proactive career behavior may have represented a form of preliminary coping rather than a form of resource accumulation. In Aspinwall and Taylor's (1997) framework, these two are interrelated stages of proactive coping that influence the appraisal of incipient stressors via feedback loops: resources and initial appraisals influence preliminary coping efforts and vice versa. A longitudinal design, rather than our current three-wave design, would be able to uncover the complexity of such feedback loops and would help to further delineate the temporality of proactive career behavior in the insecurity process.

Despite its limitations, our study suggests fruitful directions for future research. One important issue to consider in this regard is the operationalization of digitalization. In this study, we have operationalized the probability of digitalization using workers' type of occupation (Frey & Osborne, 2013). This operationalization, however, requires that workers are actually aware of the likelihood of their occupation to become digitalized. Although we assumed that this would be the case given the abundant media, organizational, and policy attention this subject has been getting lately (cf. Wike & Stokes, 2018), it may be worthwhile to also assess workers' awareness of the threat of digitalization of their occupation. Also, the operationalization we used is not without critique. For example, rather than the type of occupation, it may be the type of tasks that workers do that might result in job loss owing to developments such as digitalization and globalization (Arntz et al., 2016). Likewise, workers' level of education can make their job especially likely to be outsourced or replaced by machines (McClure, 2018; Probst et al., 2018). Although we controlled for education in the current study, it would be worthwhile to examine digitalization in conjunction with workers' education levels. In addition, the taxonomy of insecure work situations in the current study is by no means exhaustive. Other labor market developments that may cause insecurity are aging, advancing technology and changing demands regarding workers' skills and abilities.

On that same note, we suggested earlier that different insecure work situations may require different proactive career behaviors. Perhaps that workers who face a certain insecure work situation will only evaluate their work situation as controllable if they possess the appropriate proactive resources. It may be that proactive career behaviors are appropriate behaviors when they are commensurate with the determinants and perceptions involved in the examined discrepancy (Edwards, 1992). Put differently, acute insecure work situations may require proximal oriented proactive career behavior, whereas chronic insecure work situations may require more distal oriented proactive career behavior. We believe that this nuance in the benefits of proactivity deserves further examination and fits well with recent theorizing regarding "wise" proactivity (cf. Parker & Liao, 2016).

It is also possible that other types of behavioral responses or attitudinal responses might be needed to mitigate against the insecure work situations, such as career adaptability (Savickas, 2012) or employability—a construct that has received quite some attention in insecurity research (De Cuyper, Mäkikangas, Kinunen, Mauno, & De Witte, 2012; De Cuyper, Notelaers, & De Witte, 2009). At the same time, employability may follow from proactive career behavior because perceptions of employability are often based on earlier investments in skill development and career planning (De Cuyper et al., 2012). In that sense, our focus on (proactive) behaviors may constitute the potential building blocks of workers' employability perceptions. It may thus be a more direct approach for mitigating the emergence of insecurity, which offers better possibilities for intervention because it can help to prevent the emergence of feelings of job insecurity altogether. Alternatively, broader policy-based responses may be a good way to mitigate against these insecure work situations. The extensive and almost universally negative media on the topic of digitalization, with headlines such as "robots to eradicate 40% of jobs," might have generated such a strong sense of uncertainty and fear that it might require a concerted marketing campaign to rectify.

Finally, by uncovering that individual behavior can alter the appraisal of insecure work situations in the primary appraisal process, this study can open up our thinking regarding other factors that may shape the primary appraisal of insecure work situations. For example, primary appraisal can also be influenced by factors such as whether or not an event is familiar or novel, how important an event is, and when an event is likely to occur (Folkman, 1984; Aspinwall & Taylor, 1997). In that sense, expiring temporary contracts may be less likely to be appraised as threatening when these events are familiar for workers in their specific occupational contexts. That is, in some occupational sectors and in some countries, temporary contracts are the rule rather than the exception. We believe that examining how such factors may shape primary appraisals of insecure work situations—perhaps even across different countries—provides an exciting and innovative angle to insecurity research.

### Conclusion

Why do some workers experience less insecurity than others while facing the same insecure work situation? Our study shows that engaging in proactive career behavior can mitigate the lack of control that arises from acute insecure work situations, which reduces workers' perceptions of job insecurity and subsequent stress. In other words, insecure work situations do not necessarily have to be appraised as threats, and, as such, do not have to lead to subjective feelings of insecurity and its negative consequences.

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