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British Journal of Management

BJM BRITISH JOURNAL of MANAGEMENT
BRITISH ACADEMY OF MANAGEMENT
British Journal of Management, Vol. 32, 708–724 (2021)
DOI: 10.1111/1467-8551.12471

Does Voice Benefit or Harm Occupational Well-Being? The Role of Job Insecurity

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Although employee voice is integral for organizational functioning, it is not well understood how voice affects occupational well-being, particularly when jobs are perceived as insecure. Drawing from the dual-pathway model of proactivity, which is based on self-determination and conservation of resources theories, we integrate theorizing on the well-being consequences of voice with the job insecurity literature. First, we hypothesize that voice leads to increases in both vigour and fatigue. Second, we propose that job insecurity moderates these effects, such that the effect of voice on increases in vigour is stronger (weaker) when job insecurity is low (high), whereas the effect of voice on increases in fatigue is stronger (weaker) when job insecurity is high (low). Seven hundred and thirty three full-time employees in Germany participated in two surveys, three months apart. Results largely supported our predictions and showed that voice led to increases in vigour. Moreover, voice predicted increases (decreases) in fatigue when job insecurity was high (low). However, voice and job insecurity did not interact in predicting changes in vigour. Reverse causal analyses showed no effects of vigour and fatigue on changes in voice. Our discussion focuses on why and how perceptions of employment relations should be considered to determine well-being consequences of voice.

Introduction

Employee voice has been shown to be beneficial for organizational functioning, error prevention and innovation (Detert *et al*., 2013; Knoll *et al*., 2016). At the individual level, voice is a form of proactive behaviour that entails employees voluntarily and informally communicating work-related suggestions or concerns to others with the intent to affect constructive change (Morrison, 2014; van Dyne and LePine, 1998). While different proactive behaviours are strongly related (Tornau and Frese, 2013), voice is conceptually and empirically distinct from other discretionary behaviours aimed at changes in the organization (Parker and Collins, 2010), including personal initiative (i.e. self-starting and persistent proactive behaviour; Frese and Fay, 2001) or taking charge (i.e. voluntary and constructive efforts to affect functional change; Morrison and Phelps, 1999). In contrast to these behaviours, voice implies a fundamental challenge to the status quo (Hirschman, 1970; LePine and van Dyne, 1998; Van Dyne, Ang and Botero, 2003) and, therefore, is not necessarily appreciated by others in the organization (Parker and Collins, 2010; Van Dyne, Ang and Botero, 2003). Advocating for new ideas or articulating concerns can be perceived as disruptive, as it threatens routines, hierarchies and established organizational harmony (Detert and Burris, 2007; Milliken, Morrison and Hewlin, 2003). Further, superiors may perceive voice as undue or disloyal and punish employees for speaking up (Burris, 2012). Thus, engaging in voice may lead to harmful consequences, such as loss of career opportunities or damaged relationships with co-workers and

Hannes Zacher's work on this manuscript was supported by a Momentum grant awarded by the Volkswagen Foundation.

superiors (LePine and van Dyne, 1998; Milliken, Morrison and Hewlin, 2003; Ng and Feldman, 2012; Van Dyne, Ang and Botero, 2003).

Previous research has focused on performance-related and social-perceptual outcomes of voice, such as perceptions of organizational justice, job attitudes, relational outcomes and social status (Bashshur and Oc, 2015; Thomas, Whitman and Viswesvaran, 2010; Weiss and Morrison, 2019). In contrast, the possibility that voice can affect employee well-being has been largely neglected (see Starzyk, Sonnentag and Albrecht, 2018 for an exception). This is surprising, given that voice is a highly resource-demanding behaviour that requires employees to defend alternative viewpoints and talk about potentially uncomfortable issues. A lack of knowledge on how voice may affect well-being is problematic, as poor well-being may lead to withdrawal, increased turnover and deterioration of health (Wilson *et al*., 2004). Negative reactions from others and career consequences can potentially damage the well-being of employees engaging in voice (Bolino, Valcea and Harvey, 2010; Ng and Feldman, 2012). However, voice may also entail positive consequences. When employees perceive that they can freely express their opinions and affect changes in the organization, they act in accordance with their true self and, consequently, experience higher well-being (Kahn, 1990; Knoll and van Dick, 2013).

Due to the potentially two-sided nature of the consequences of voice, we suggest that the recently developed dual-pathway model of proactivity is a useful framework to address the question of how voice affects employee well-being (Cangiano and Parker, 2016). Focusing on proactive behaviour in general, the model suggests that proactive behaviour constitutes a double-edged sword for well-being. Specifically, behaviours such as voice may both lead to well-being via an 'energy-generating pathway' and to strain via a 'resource-depleting pathway' (Cangiano and Parker, 2016; Carnevale, Huang and Harms, 2018; Hobfoll, 1989).

Building on the dual-pathway model of proactivity and the underlying energetic processes it proposes, we focus on two important and complementary occupational well-being outcomes that reflect energetic activation and resource depletion. *Vigour* is a dimension of positive affect that involves high levels of emotional energy and mental resilience at work, coupled with experiences of contentment and pleasantness (Bakker and Demerouti, 2008; Quinn, Spreitzer and Lam, 2012; Shirom, 2011). It is a measure of human energy and considered the key aspect of work engagement (Seipp, 2020; Shirom, 2011). In contrast, *emotional work fatigue* (henceforth abbreviated as *fatigue*) is a dimension of strain and lack of energy. It entails both a feeling of immense tiredness and a reduced capacity and/or motivation to deal with input (Frone and Tidwell, 2015).

We propose that engaging in voice leads to increases in both vigour and fatigue over time. However, because voice is always embedded in a specific organizational and employment context, its consequences are affected by factors on multiple levels (Morrison, 2014; Wilkinson and Fay, 2011; Wilkinson, Barry and Morrison, 2020). Employees consider their social context to determine whether voice is risky or not and how it will affect them once they have engaged in it (Detert and Edmondson, 2011; Edmondson, 1999). Thus, we focus on an important social-perceptual moderator that may explain how voice affects well-being. We propose that job insecurity moderates the relationships between voice and the two well-being outcomes, vigour and fatigue. *Job insecurity* is defined as employees' concern that their job is at risk and may not exist in the future (de Witte, 1999). It has repeatedly been shown to constitute an important risk factor for work-related strain, including vigour and fatigue (De Witte, Pienaar and de Cuyper, 2016). Moreover, job insecurity is an increasingly common phenomenon that may act as a stressful condition or, in the case of high job security, as a resource for employees engaging in voice (Mauno *et al*., 2014). In contrast to other individual perceptions of the work context, such as psychological safety, job insecurity is a particularly harmful threat that implies potential loss of employment and its associated financial and social resources (de Witte, 1999; Jahoda, 1982). It represents a link between micro- and meso-level factors as it captures employees' perceptions of the meso-level context. Our conceptual model and hypotheses are shown in Figure 1.

We aim to investigate the link between voice and well-being and to determine how job insecurity shapes the well-being outcomes of voice. Thereby, we contribute to the literatures on voice and occupational well-being in three meaningful ways. First, we respond to repeated calls to broaden the

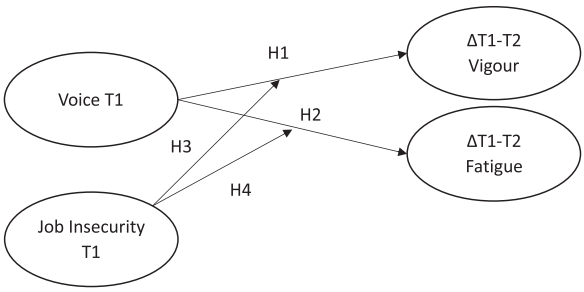

Figure 1. Hypothesized model
Note: T = time, H = hypothesis, Δ = change.

criterion domain of proactive behaviour, specifically voice, beyond performance-related outcomes (Bolino, Valcea and Harvey, 2010; Cangiano and Parker, 2016). We focus on voice as a fundamentally challenging proactive behaviour that may entail opposing well-being effects. We also broaden the dual-pathway model of proactivity by including an important contextual moderator that has been neglected in the context of voice, namely job insecurity. Previous research demonstrated moderating effects of punitive supervision and perceived organizational support on the resource-depleting pathway (Cangiano, Parker and Yeo, 2019; Zacher *et al*., 2019). However, it remains to be understood how perceptions of one's job as more or less secure interact with the two pathways.

Second, by examining job insecurity as a moderator, we identify a key employment-related condition that may determine whether voice has positive or negative effects on well-being. Previous research has focused on employees' proactive efforts to cope with job insecurity (e.g. Stiglbauer and Batinic, 2015) or has investigated how voice is influenced by stressful working conditions (Ng and Feldman, 2012). We investigate how voice impacts on well-being in situations characterized by different levels of job insecurity. Thus, our research provides micro-level insights into the well-being consequences of voice against the background of an increasingly insecure and precarious employment context (Kalleberg, 2009). Finally, we expect voice to be a recurrent behaviour that has an unfolding and dynamically accumulating effect on well-being (Frese and Zapf, 1988). With our two-wave study design, we are able to draw relatively strong conclusions regarding the causal direction of effects by explaining change in occupational well-being due to voice (Bashshur and Oc, 2015; Selig and Preacher, 2009). Indeed, several studies have shown work energy to affect the level of voice (e.g. Carnevale, Huang and Harms, 2018; Schmitt, Belschak and Den Hartog, 2017). Accordingly, we supplement our main analyses with tests of reverse effects of well-being and job insecurity on changes in voice.

Theoretical background and hypothesis development

Effects of voice on increases in vigour and fatigue

Voice has been defined as 'informal and discretionary communication by an employee of ideas, suggestions, concerns, information about problems or opinions about work-related issues to persons who might be able to take appropriate action' (Morrison, 2014, p. 174). As such, it is integral for organizational functioning; evident, for example, in uncovering organizational misconduct. In her review, Morrison (2014) proposed a conceptual framework differentiating between antecedents and consequences of voice. The majority of research to date focuses on antecedents of voice, such as personality, leadership or organizational factors (e.g. Edmondson, 2003; LePine and van Dyne, 2001; Morrison, Wheeler-Smith and Kamdar, 2011). Most research on the consequences of voice has focused on performance and social outcomes for the individual, suggesting that constructively expressed voice can lead to elevated performance ratings and higher social status among employees (Burris, 2012; Weiss and Morrison, 2019; Whiting *et al*., 2012).

However, what is missing is a thorough understanding of how voice as a challenging, and thus highly demanding, behaviour affects employee well-being. Even though research has shown that voice can be a means to cope with workplace stressors (Ng and Feldman, 2012), it is not clear how voice itself affects well-being. To shed more light on this issue, we draw on the dual-pathway model of proactivity by Cangiano and Parker (2016), which is based on self-determination theory (Ryan and Deci, 2000) and conservation of resources (COR) theory (Hobfoll, 1989). Based on this model, we argue that voice can impact well-being via two antagonistic pathways, an energy-generating pathway and a resource-depleting pathway. Vigour and fatigue represent opposite states of energetic activation and well-being. Yet, they are distinct energy constructs and not two ends

of the same continuum (Demerouti, Mostert and Bakker, 2010; Mäkikangas *et al*., 2012). Therefore, they could both be positively influenced by voice. Whereas vigour, in itself a goal for people, has been shown to relate to other positive consequences (e.g. motivation, physical health; Chida and Steptoe, 2008; Shirom, 2011), fatigue can lead to serious health problems if activation and overload are sustained (Meijman and Mulder, 1998).

The dual-pathway model of proactivity suggests that proactive behaviour can positively affect well-being, here operationalized as vigour, via an energy-generating pathway, because it contributes to the fulfilment of the basic needs for competence, autonomy and relatedness (Ryan and Deci, 2000; Strauss and Parker, 2014). For voice behaviour, this pathway can materialize in three ways. First, engaging in voice is, in a positive sense, challenging (Fay and Sonnentag, 2012), and thus can promote experiences of mastery and competence (Massimini and Carli, 1988). Second, voice is self-initiated and typically intrinsically motivated (Cangiano and Parker, 2016). It can therefore enhance feelings of autonomy, control and authenticity that are conducive to well-being (Carnevale, Huang and Harms, 2018; Knoll and van Dick, 2013). Third, voice can improve relations with others at work by asking for feedback or sharing novel ideas, thus contributing to the need of relatedness (Strauss and Parker, 2014). Voice can also improve relationships at work, and high-quality relationships have been found to be invigorating (Cangiano and Parker, 2016; Shirom, 2011). Empirically, an initial study that examined the dual-pathway model confirmed the validity of the energy-generating pathway. In a daily diary study, Cangiano, Parker and Yeo (2019) showed that proactive behaviour is positively associated with experienced competence and vitality. In addition, two earlier studies found a positive relationship between voice and work engagement (Cheng *et al*., 2013; Rees, Alfes and Gatenby, 2013).

Voice may also entail negative well-being consequences via the resource-depleting pathway. According to COR theory, individuals strive to protect the resources they value and to seize new resources (Hobfoll, 1989). The process underlying the resource-depleting pathway implies that an increase in resource investments through proactivity diminishes existing resources and inhibits the acquisition of new resources (Cangiano and Parker, 2016; Janssen, van de Vliert and West, 2004). Consistently, Bolino, Valcea and Harvey (2010) emphasize that proactive behaviours necessitate the investment of personal resources, such as time and energy. This should especially hold true for voice, which is particularly demanding (Ng and Feldman, 2012). Indeed, a recent study showed that voice both necessitates and depletes self-regulatory resources (Xia, Schyns and Zhang, 2020). Voice involves a resource-demanding goal-regulation process of envisioning, planning, enacting and reflecting that requires spending existing resources and does not necessarily foster resource acquisition (Bindl *et al*., 2012). In addition, voice might result in role overload as employees who often speak up take on additional tasks outside their job description (Bolino and Turnley, 2005). Accordingly, employees showing higher initiative in the workplace experience greater psychological costs, including role overload, job stress and work–family conflict (Bolino and Turnley, 2005). Research indicates that, assessed on a daily basis, proactivity predicts fatigue (Fay and Hüttges, 2017). Finally, voice also involves psychological risk as it can be perceived as a threat to the status quo, may be opposed by others (Bolino, Valcea and Harvey, 2010) and may not always fulfil the need of relatedness but, instead, can also increase conflict at work (Spychala and Sonnentag, 2011). Therefore, while resource investment is necessary for the protection, restoration and acquisition of resources, consecutive resource protection and acquisition cannot be taken for granted in the case of voice due to the risk implied when speaking up. The first principle of COR theory postulates that (the threat of) resource loss is more salient than resource gain (Hobfoll, 2011). This suggests that resource depletion and, subsequently, feelings of fatigue may follow voice behaviour (Zijlstra, Cropley and Rydstedt, 2014).

Previous research has found preliminary evidence for the postulated resource-depleting pathway. A daily diary study found that proactive behaviour was positively related to anxiety and negatively related to detachment, but only when punitive supervision was high (Cangiano, Parker and Yeo, 2019). A longitudinal study across one year found negative effects of personal initiative on negative affect, but only when perceived organizational support was low (Zacher *et al*., 2019).

In summary, based on Cangiano and Parker's (2016) dual-pathway model and its proposition that proactive behaviour can affect occupational

well-being by being both 'energy-generating' and 'resource-depleting', we expect voice to simultaneously have positive effects on increases in vigour and fatigue. As occupational well-being can change dynamically within employees over time (Frese and Zapf, 1988), we measure changes over a time lag of three months, following recommendations for optimal time lags and based on the assumption that the effects of voice can unfold in this time lag (Dorman and Griffin, 2015).

H1: Voice has a positive effect on increases in vigour.

H2: Voice has a positive effect on increases in fatigue.

Job insecurity as a moderator

The embeddedness of voice in the specific organizational and employment context suggests differential consequences for voice behaviour depending on meso- or macro-level factors (Morrison, 2014; Wilkinson and Fay, 2011; Wilkinson, Barry and Morrison, 2020). Employees perceive those context factors and may act and feel correspondingly. We argue that the perception of the employment situation, particularly in the form of job insecurity, moderates the relationship between voice and well-being. Job insecurity is of rising practical relevance, as organizational behaviour increasingly takes place in complex and insecure environments (Cangiano and Parker, 2016; Kalleberg, 2009). Between 9% and 54% of European employees feel threatened by job loss, depending on factors like place of residence, national economy, sectorial or demographic variables (De Witte, Vander Elst and de Cuyper, 2015). From a theoretical perspective, job insecurity plausibly impacts the energy-generating and resource-depleting pathways from voice to vigour and fatigue.

Job insecurity is considered a hindrance stressor, that is, a job demand impeding well-being that has repeatedly been shown to negatively affect mental health (Cavanaugh *et al*., 2000; De Witte, Pienaar and de Cuyper, 2016; Schreurs *et al*., 2015). Previously, the impact of stressors (and resources) on the use of voice has received far more attention than the impact of voice under the presence of stressors (e.g. Berntson, Näswall and Sverke, 2010; Breevaart *et al*., 2020). Voice challenges the status quo and thus likely interacts with job insecurity in predicting well-being because employees with high job insecurity may fear even more backlash from superiors when they engage in voice (Detert and Edmondson, 2011). Moreover, when job insecurity is high, employees may feel more pressured to show voice to prove their performance in order to secure their employment. Knoll *et al*. (2016) argued that when voice is a required organizational behaviour, it may lead to negative employee outcomes. Voice has traditionally been positioned as a psychologically important opportunity to influence one's working conditions. However, the possibility to remain silent may likewise be essential for well-being under insecure conditions, as withholding voice can be used as a tool of employee resistance and exertion of power (Bies, 2009; Donaghey *et al*., 2011; Knoll *et al*., 2016). Different motives for voice (e.g. to keep one's job) may lead to different outcomes (Bormann and Rowold, 2016; Chamberlin, Newton and Lepine, 2017; Knoll *et al*., 2016; Starzyk, Sonnentag and Albrecht, 2018). When it is perceived as a necessity due to contextual demands or insecurities, engaging in voice should be more stressful (Cangiano and Parker, 2016). In the context of job insecurity, high job insecurity places additional demands on employees or pressures them to express concerns when they fear for their employment already. These arguments suggest that high job insecurity impedes the energy-generating and strengthens the resource-depleting effect of voice.

Regarding the energy-generating pathway, we have argued that voice leads to increased vigour because it helps fulfil individuals' basic needs. We further argue that job insecurity negatively affects the positive impact of voice on vigour, because it impedes the energy-generating pathway from voice to vigour. We expect voice to lead to stronger increases in vigour when job insecurity is low, as the energy-generating pathway is undisturbed by a hindrance stressor and the basic needs can be met via a sense of mastery and control (Mauno *et al*., 2014; Ryan and Deci, 2000; Van den Broeck *et al*., 2008; Zijlstra, Cropley and Rydstedt, 2014). If job insecurity is high, however, this pathway is disturbed, and basic needs fulfilment is not possible as feelings of competence and relatedness are impeded (Seipp, 2020). Voice is also less likely to satisfy an individual's need for autonomy when hindrance stressors are present (Strauss, Parker and O'Shea, 2017). Voice may further be conceived as less meaningful when job insecurity is high, as employees might feel that they will not benefit

from potential changes in the organization (Breevaart and Tims, 2019). Thus, high (vs. low) job insecurity should weaken the invigorating effect of voice behaviour.

In the voice literature, the positive interplay of resources like trust or positive leader–member exchange with voice and work engagement has been well established (Cheng *et al*., 2013; Rees, Alfes and Gatenby, 2013). Further, feeling psychologically safe at work has been established to be an essential condition for a positive link between risky proactive behaviour and well-being (Baer and Frese, 2003).

H3: Job insecurity moderates the effect of voice on increases in vigour, such that the effect is stronger when job insecurity is low and weaker when job insecurity is high.

In contrast, with regard to the resource-depleting pathway, voice should less strongly lead to increases in fatigue when job insecurity is low and more strongly lead to increases in fatigue when job insecurity is high. Under high job insecurity, voice is more likely to be accompanied by feelings of organizational injustice, low psychological safety, pressure to show voice behaviour and personal threat (Cangiano and Parker, 2016; Knoll *et al*., 2016). Investing resources through voice behaviour while being threatened by resource loss and potentially feeling under pressure to show voice will, following the COR theory principle of heightened vulnerability under stressful conditions, further intensify resource depletion. Therefore, it will intensify the experienced fatigue that we expect to follow voice behaviour either way.

Furthermore, voice requires self-control and depletes self-regulatory resources (Xia, Schyns and Zhang, 2020). Engaging in voice can be expected to drain more self-regulatory resources under high job insecurity due to being externally motivated and to a heightened fear of backlash. Therefore, stronger depletion of self-regulatory resources will ensue (Baumeister *et al*., 1998; Quinn, Spreitzer and Lam, 2012; Xia, Schyns and Zhang, 2020). Further, employees may feel that their efforts to improve organizational functioning are under-appreciated when experiencing job insecurity. Previous research shows that innovative behaviour, which entails that individuals speak up with novel ideas or suggestions, is more likely to induce job-related anxiety and burnout when perceived organizational fairness is low (Janssen, 2003, 2004). Moreover, the resource-depleting pathway of proactive behaviour has been replicated under conditions of punitive supervision (Cangiano, Parker and Yeo, 2019).

H4: Job insecurity moderates the effect of voice on increases in fatigue, such that the effect is weaker when job insecurity is low and stronger when job insecurity is high.

Method

Participants and procedure

This study was approved by the Ethics Advisory Board of Leipzig University (No. 2019.06.25_eb_16, Study Title: Longitudinal Study on Work, Age, and Health). Data were collected from 733 employees in Germany at two measurement points (time T1 and T2) with a time lag of three months. The data were part of a larger data collection effort and other manuscripts based on this dataset address completely different research questions. So far, one article based on this dataset has been published (topic: age-inclusive HR practices, age diversity climate and work ability; Rudolph and Zacher, 2021).

We commissioned an online research company to recruit participants. Initially, in August 2017 (T1), 5,798 invitations were sent to individuals in the company's database. In total, 1,152 individuals followed this invitation and provided basic demographic information (19.9% response rate). Of these, 946 indicated working full time and completed the survey at T1. At T2, data were provided by 733 employees (22.5% dropout rate).

Participants included 429 men (58.5%) and 304 women (41.5%). Ages ranged from 20 to 73 years, with an average age of 44.14 years (SD = 12.36). Average job tenure was 16.41 years (SD = 12.29). In terms of educational level, two (0.2%) had no qualifications, 54 (7.4%) finished general secondary school, 202 (27.6%) finished intermediate secondary school, 109 (14.9%) had obtained a high-school degree, 97 (13.2%) held a technical college/applied university degree and 269 (36.7%) held a university degree. Participants worked in a broad range of sectors (e.g. education, health services, administration, sales, computer engineering).

We used independent-sample t-tests to compare participants who participated at both

measurement waves with participants who participated at T1 only, in the core T1 variables (voice, job insecurity, vigour, fatigue), as well as age, sex and education. There were no significant differences in these variables between the two groups, except that women ($N_{T1 \text{ and } T2} = 304$; $N_{T1 \text{ only}} = 221$) were more likely to drop out than men ($N_{T1 \text{ and } T2} = 429$; $N_{T1 \text{ only}} = 170$; $\chi^2(1) = 23.20$, $p < 0.001$). Following Goodman and Blum (1996) and adjusting for multiple comparisons, we compared the variances of the focal variables between participants participating at T1 only and participants participating in both measurement waves. The variances did not differ significantly. The correlations among T1 voice, job insecurity, vigour and fatigue did not differ significantly between 'T1 and T2 respondents' and 'T1 only respondents', except for the correlations between voice and vigour ('T1 and T2': $r = 0.37$; 'T1 only': $r = 0.52$; $p = 0.019$). However, the correlation is higher among 'T1 only respondents', and thus we can expect our estimation to be more conservative.

Measures

We asked participants to reflect on their work-related attitudes and behaviour in the past three months. All items were worded in active past tense.

Voice. We measured employee voice behaviour at T1 and T2 with the six-item voice scale from van Dyne and LePine (1998). Two example items are 'I communicated my opinions about work issues to others in my work group even if my opinion was different and others in the group disagreed with me' and 'I spoke up in my work group with ideas for new projects or changes in procedures'. The responses were made on five-point scales ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Alphas were 0.92 at T1 and 0.93 at T2.

Job insecurity. We assessed job insecurity at T1 and T2 with the four-item scale from the Copenhagen psychosocial questionnaire (Kristensen *et al.*, 2005). The items were preceded by the phrase 'In the last three months, I worried about…'. Two example items are '…becoming unemployed' and '…new technology making me redundant'. The responses were made on five-point scales ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Alphas were 0.84 at T1 and 0.87 at T2.

Vigour. We assessed vigour at T1 and T2 with the six items from the Utrecht work engagement scale (Schaufeli *et al.*, 2002). Two example items are 'At my job, I felt strong and vigorous' and 'At my work, I felt bursting with energy'. Responses were provided on a scale ranging from 1 (*never*) to 7 (*always*). Alphas were 0.90 at T1 and 0.91 at T2.

Fatigue. We measured fatigue at T1 and T2 with three emotional work fatigue items (Frone and Tidwell, 2015). The items were preceded by the phrase 'In the last three months, how often…'. Two example items are '…did you feel emotionally worn out at the end of the workday?' and '…did you have difficulty showing and dealing with emotions at the end of the workday?' Responses were provided on a scale ranging from 1 (*never*) to 5 (*always*). Alphas were 0.90 at T1 and 0.94 at T2.

Statistical analyses

We conducted the following four sets of analyses with the software Mplus (Muthén and Muthén, 2015). First, we ran confirmatory factor analyses (CFA) to examine our measurement model at both time points. Second, we examined configural and metric equivalence of the latent variables, separately and in combination, across the two measurement points. At both measurement points, we used the items as indicators of the latent voice variable. Establishing equivalence of measurement models and factor loadings is necessary to ensure that comparisons on the latent variables are valid across time points (Van de Schoot, Lugtig and Hox, 2012). We assumed that an acceptable model fit was indicated by comparative fit index (CFI) values greater than 0.90, root mean square error of approximation (RMSEA) values smaller than or close to 0.08 and standardized root mean square residual (SRMR) values smaller than or close to 0.08 (Browne and Cudeck, 1993; Hu and Bentler, 1999).

Third, we tested our hypotheses using a combination of a latent difference score (LDS) approach and a latent moderated structural (LMS) equations approach (see also Bamberger, Geller and Doveh, 2017). This approach is more appropriate for the test of models incorporating change in constructs over time than traditional moderated-mediation analysis and cross-lagged panel models. In particular, the use of LDS variables addresses the problem of measurement error and allows

Table 1. Descriptive statistics and correlations

	M	SD	1	2	3	4	5	6	7
1. T1 Voice	3.30	0.96	(0.92)						
2. T2 Voice	3.34	0.93	0.66**	(0.93)					
3. T1 Job insecurity	1.88	0.97	−0.06	0.00	(0.84)				
4. T1 Vigour	4.20	1.15	0.37**	0.27**	−0.24**	(0.90)			
5. T2 Vigour	4.21	1.14	0.32**	0.35**	−0.15**	0.64**	(0.91)		
6. T1 Fatigue	2.27	1.03	−0.02	0.00	0.51**	−0.38**	−0.28**	(0.90)	
7. T2 Fatigue	2.30	1.05	−0.02	0.03	0.43**	−0.33**	−0.34**	0.63**	(0.94)

Notes: N = 733; T = time; alphas reported in parentheses along the diagonal.
**$p < 0.01$.

examining the effect of one variable on change in another variable over time (Selig and Preacher, 2009). We included T1 job insecurity, T1 voice, as well as T1 and T2 vigour and fatigue as latent variables in the model and, using the XWITH command in Mplus, specified latent interaction effects of T1 job insecurity and T1 voice on T1–T2 change (Δ) in vigour and fatigue. Importantly, ΔT1–T2 vigour and ΔT1–T2 fatigue are a function of their respective T1 and T2 latent variables. To define these variables, we (a) fixed the loadings of the paths from each change variable to its respective T2 latent variable to 1 and set the residual variance to 0, (b) specified the T2 latent variables as a function of their respective T1 latent variables, with weightings fixed to 1 and residual variance set to 0, and (c) regressed the change variables on their respective latent T1 variables (Bamberger, Geller and Doveh, 2017; Selig and Preacher, 2009; Zacher *et al*., 2019). We also imposed measurement invariance by holding the loadings of the factor indicators equal over time (see Mplus syntax in the Appendix).

Mplus does not provide traditional fit indices for models including latent variable interactions (Maslowsky, Jager and Hemken, 2015). However, methodologists have recommended an alternative two-step approach for assessing the fit of LMS models (Klein and Moosbrugger, 2000; Muthén, 2012). Specifically, CFI, TLI, RMSEA and χ^2 values are obtained from a model without the interaction term (Model 1). The relative fit of this model and a model including the latent interactions (Model 2) is compared using a log-likelihood ratio test. Specifically, this test estimates whether the more parsimonious model without interactions represents a significant loss in fit relative to the more complex model with interactions (Bamberger, Geller and Doveh, 2017; Maslowsky, Jager and Hemken, 2015). Finally, as a supplementary analysis, we tested a reverse causal model (Model 3) by adding T2 voice and ΔT1–T2 voice, effects of T1 vigour and fatigue on ΔT1–T2 voice, as well as interactive effects of T1 job insecurity with T1 vigour and fatigue, respectively, on ΔT1–T2 voice to the hypothesized model.

Results

The descriptive statistics and correlations are shown in Table 1. The stability (i.e. autocorrelations) of voice, vigour and fatigue across the two measurement points ranged from 0.63 to 0.66 ($p < 0.001$). Voice was positively correlated with vigour, but not significantly correlated with fatigue and job insecurity. Moreover, job insecurity was negatively correlated with vigour and positively correlated with fatigue, and vigour and fatigue were negatively intercorrelated.

Dimensionality of study variables

CFAs showed that the variables differed from each other at both measurement occasions (Table 2). Specifically, for the T1 data, a four-factor model (with voice, job insecurity, vigour and fatigue) had an adequate fit to the data ($\chi^2[df = 146] = 793.909$, $p < 0.001$, CFI = 0.935, TLI = 0.924, RMSEA = 0.078, SRMR = 0.046) and fitted the data better than a three-factor model (with vigour and fatigue indicators loading on the same factor) and a one-factor model (with all indicators loading on a single factor). Similar results were obtained for the T2 data (Table 2).

Table 2. Results of confirmatory factor analyses

Time point	Model	χ^2	df	p	CFI	TLI	RMSEA	SRMR
Time 1	Four factors: voice, job insecurity, vigour, fatigue	793.909	146	<0.001	0.935	0.924	0.078	0.046
	Three factors: voice, job insecurity, vigour + fatigue	2,423.295	149	<0.001	0.771	0.738	0.144	0.117
	One factor	6,267.668	152	<0.001	0.385	0.308	0.234	0.206
Time 2	Four factors: voice, job insecurity, vigour, fatigue	739.804	146	<0.001	0.944	0.934	0.074	0.047
	Three factors: voice, job insecurity, vigour + fatigue	3,305.152	149	<0.001	0.702	0.757	0.170	0.174
	One factor[a]							

[a] Model did not converge.

Table 3. Results of measurement equivalence analyses

	χ^2	df	CFI	TLI	RMSEA	SRMR	ΔCFI	ΔTLI	ΔRMSEA	ΔSRMR
All four factors										
Configural invariance	2,029.558	626	0.939	0.932	0.055	0.049				
Metric invariance	1,921.906	633	0.950	0.944	0.046	0.046	0.011	0.012	−0.009	−0.003
Voice										
Configural invariance	249.483	50	0.972	0.963	0.074	0.027				
Metric invariance	275.183	52	0.972	0.965	0.067	0.028	0.000	0.002	−0.007	0.001
Job insecurity										
Configural invariance	44.818	15	0.992	0.985	0.052	0.018				
Metric invariance	59.494	18	0.990	0.984	0.050	0.023	−0.002	−0.001	−0.002	0.005
Vigour										
Configural invariance	675.133	47	0.912	0.877	0.135	0.066				
Metric invariance	734.993	52	0.915	0.892	0.119	0.062	0.003	0.015	−0.016	−0.004
Fatigue										
Configural invariance	8.431	5	0.999	0.997	0.031	0.008				
Metric invariance	8.159	7	1.000	0.999	0.013	0.008	0.001	0.002	−0.021	0.000

Measurement equivalence

Table 3 shows the results of the configural (i.e. free factor loadings) and metric equivalence analyses (i.e. factor loadings invariant). Constraining the factor loadings to be equal across time in the metric equivalence analyses did not substantially change the fit for each latent variable and the combination of the four variables. Specifically, changes in CFI, TLI, RMSEA and SRMR were lower than recommended cut-off values of ΔCFI/TLI greater than −0.010, ΔRMSEA smaller than 0.015 and ΔSRMR smaller than 0.030 (Chen, 2007; Cheung and Rensvold, 2002), suggesting that measures were equivalent across time points.

Hypothesis tests

Results of the three structural equation models are shown in Table 4. The model without interaction terms (Model 1) fit the data well ($\chi^2[335] = 1{,}294.621$, $p < 0.001$, CFI = 0.942, TLI = 0.935, RMSEA = 0.063, SRMR = 0.051). This model allows testing H1 and H2. According to H1, voice has a positive effect on increases in vigour. This hypothesis was supported by a positive effect of T1 voice on ΔT1–T2 vigour (0.09, $p = 0.009$). H2 states that voice has a positive effect on increases in fatigue. As T1 voice did not have a significant effect on ΔT1–T2 fatigue (Table 4, Model 1), this hypothesis was not supported.

Model 2 in Table 1 additionally contains the interaction effects of voice and job insecurity on changes in vigour and fatigue, respectively. According to H3, job insecurity moderates the positive effect of voice on increases in vigour, such that the effect is stronger when job insecurity is low and weaker when job insecurity is high. As shown in Table 4, the interaction effect between voice and job insecurity on vigour was non-significant. Voice seems to affect increases in vigour independent of the level of job insecurity. Thus, H3 was not supported.

H4 states that job insecurity moderates the effect of voice on increases in fatigue, such that the effect is weaker when job insecurity is low and stronger when job insecurity is high. Voice did not have a

Table 4. Results of structural equation model without interactions (Model 1), hypothesized structural equation model (Model 2) and reverse causal structural equation model (Model 3)

	Model 1		Model 2		Model 3
	ΔT1–T2 Vigour	ΔT1–T2 Fatigue	ΔT1–T2 Vigour	ΔT1–T2 Fatigue	ΔT1–T2 Voice
Predictor	Estimate (SE)	Estimate (SE)	Estimate (SE)	Estimate (SE)	Estimate (SE)
T1 Vigour	−0.39 (0.03)**		−0.40 (0.03)**		0.03 (0.04)
T1 Fatigue		−0.41 (0.04)**		−0.42 (0.04)**	−0.01 (0.04)
T1 Voice	0.09 (0.03)**	<0.01 (0.03)	0.10 (0.03)**	0.02 (0.03)	−0.34 (0.03)**
T1 Job insecurity	−0.01 (0.04)	0.18 (0.05)**	−0.02 (0.04)	0.17 (0.05)**	0.06 (0.04)
T1 Voice × T1 Job insecurity			0.06 (0.04)	0.12 (0.04)**	
T1 Job insecurity × T1 Vigour					0.01 (0.03)
T1 Job insecurity × T1 Fatigue					−0.02 (0.03)
R^2	0.20**	0.17**	0.20**	0.20**	0.19**
Log-likelihood (df)	−25,559.671 (99)		−25,552.221 (101)		

Notes: T = time; unstandardized coefficients are reported.
**p < 0.01.

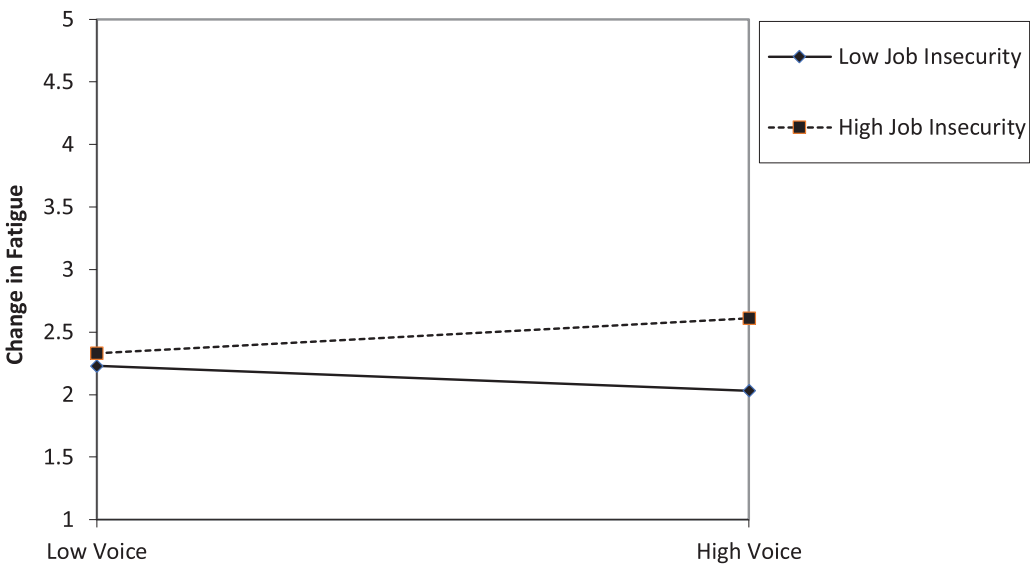

Figure 2. Effect of voice on change in fatigue moderated by job insecurity [Colour figure can be viewed at wileyonlinelibrary.com]

significant main effect on change in fatigue, but job insecurity (0.17, p < 0.001) and the interaction between voice and job insecurity (0.12, p = 0.002) significantly predicted change in fatigue (Table 4, Model 2). Simple slope analyses revealed that the effect of voice on decreases in fatigue was positive when job insecurity was low (i.e. −1 SD; simple slope = −0.10, p = 0.030). In contrast, the effect of voice on increases in fatigue was positive when job insecurity was high (i.e. +1 SD; simple slope = 0.13, p = 0.015). This interaction effect is shown in Figure 2. The effect of voice on change in fatigue seems to depend on the level of job insecurity that employees experience. Consistent with H4, voice increases fatigue when job insecurity is high. Unexpectedly, the effect of voice on increases in fatigue was not only weaker when job insecurity was low, but even led to decreases in fatigue. We assessed the fit of the model with interaction effects (Model 2) by comparing it to the model without interaction effects (Model 1). The result (−2*Δlog-likelihood[df = 2] = 7.45, p < 0.05) indicates that the elimination of the interaction terms would result in a significant loss in model fit. This suggests that, similar to Model 1 without interactions, Model 2 with interactions fits the data well (Maslowsky, Jager and Hemken, 2015).

Supplementary results

The results of the reverse causal model (Table 4, Model 3) show that T1 vigour, fatigue and job insecurity did not have main effects on change in voice over time, and their respective interactions also did not yield significant effects. As this model contains an additional outcome, and thus is not nested within Models 1 and 2, we were not able to compare the fit of these models. We note, however, that the effects found in Model 2 remained significant when estimated simultaneously.

Discussion

This study aimed to investigate whether employee voice enhances both vigour and fatigue as two important and antagonistic aspects of employee well-being. Additionally, we examined how job insecurity impacts the hypothesized relationships. While our findings support the assumption that voice predicts increases in vigour over time, voice did not have a main effect on increases in fatigue over time (i.e. using a time lag of three months). However, job insecurity moderated the effect of voice on changes in fatigue, such that voice increased fatigue when job insecurity was high and reduced fatigue when job insecurity was low. In contrast, we did not find the expected interaction effect of voice and job insecurity on vigour.

The pattern of direct effects suggests that our results yield further evidence for the energy-generating pathway of proactive work behaviours (Cangiano, Parker and Yeo, 2019; Zacher *et al*., 2019). Yet, we found only conditional support for the resource-depleting pathway of proactivity: the negative effects of voice do not ensue per se; instead, voice seems to be primarily energizing and enhancing well-being. A plausible explanation of this pattern lies in the mechanisms behind voice and silence as recently proposed by Sherf *et al*. (2020). Investigating differences between voice and silence, the conscious withholding of potentially important content (Morrison, 2011), the researchers argue that voice and silence are independent constructs, being regulated, respectively, by the behavioural activation/inhibition system (BAS/BIS). Concerning the consequences of these behaviours, Sherf *et al*. (2020) show that the relationship between voice and burnout is weaker than the relationship between silence and burnout. Their line of reasoning is that frequent engagement in BIS, for example by being silent about concerns regarding the workplace, entails heightened anxiety and alertness (Carver and White, 1994). In contrast, engaging in voice is regulated by the BAS (Sherf *et al*., 2020), which has been found to be unrelated to strain (Johnson *et al*., 2012). Our results regarding a direct effect from voice on increases in vigour but not on increases in fatigue align with this argumentation.

Regarding the pattern of interaction effects, with a moderating effect of job insecurity on the effects of voice on fatigue but not on vigour, we assume that the energy-generating pathway is not (easily) affected by the perception of external conditions. This matches with the results of Cangiano, Parker and Yeo (2019), which suggest that the process of fulfilling the needs for competence and environmental mastery underlying the energy-generating pathway is relatively independent of context. The fulfilment of these needs might therefore directly lead to well-being. Recognizing that the developmental pathways for vigour and fatigue differ (Kinnunen *et al*., 2014), and that we assume different underlying mechanisms for vigour and fatigue, respectively, it is plausible that only the resource-depleting pathway is affected by job insecurity. Even though a direct effect on fatigue was not supported in our study, resource depletion as predicted by COR theory ensues when experiencing job insecurity (Hobfoll, 1989). This matches the reasoning of Frese and Zapf (1988), which suggests that some processes between antecedents and outcomes only materialize when 'switched on' by a moderator. This seems to be the case for the relationship between voice and fatigue; our results show that the individual perception of the employment context is relevant and interacts with the effects of voice in predicting fatigue. They are also consistent with prior research examining punitive supervision and perceived organizational support as moderators of the relationship between proactive behaviour and well-being (Cangiano, Parker and Yeo, 2019; Zacher *et al*., 2019).

Employees may perceive a heightened responsibility to voice when, at the same time, feeling more insecure in their jobs. This can increase feelings of fatigue (Detert and Edmondson, 2011; Knoll *et al*., 2016). In contrast, when job insecurity is low, people seem to be able to cope more successfully with the psychological risks that

voice entails. This is in line with Cangiano, Parker and Yeo (2019), who could only demonstrate the resource-depleting pathway under conditions of a hindrance stressor. Further, the asymmetry regarding the interaction effects on vigour and fatigue could be attributed to the proposed asymmetry in the job demands–resources model (Bakker and Demerouti, 2007): job demands are assumed to relate more strongly to strain than to well-being outcomes, while well-being is supposed to be more dependent on resources. Correspondingly, studies have reported weaker associations of job insecurity with vigour than with exhaustion (Cheng, Mauno and Lee, 2014; Kinnunen *et al*., 2014).

Our additional analyses did not reveal reverse effects of vigour and fatigue on voice. This is incongruent with previous research revealing a positive effect of positive mood on proactive behaviour (Bindl *et al*., 2012) and of vigour on (intention to) voice (Carnevale, Huang and Harms, 2018; Schmitt, Belschak and Den Hartog, 2017). Possible explanations for the diverging findings may lie in different time lags (Schmitt, Belschak and Den Hartog, 2017), different proactivity constructs (Bindl *et al*., 2012) or not testing for reverse effects (Carnevale, Huang and Harms, 2018).

Theoretical and practical implications

Our main theoretical implications are threefold. First, we add to existing research suggesting that voice has important implications for the individual, beyond performance-related outcomes (Bolino, Valcea and Harvey, 2010). Specifically, our finding of a positive effect of voice on increases in vigour provides additional support for the energy-generating pathway of proactivity (Cangiano and Parker, 2016). We further advance the literature on proactive behaviour in general and voice specifically by showing that, consistent with other studies, the resource-depleting pathway is not unconditionally valid, but materializes depending on the perception of organizational boundary conditions (e.g. job insecurity, punitive supervision, low perceived organizational support). This specifies the metaphor of voice as a double-edged sword to the metaphor of a useful sword that mostly entails good for those who speak up, but that can be detrimental to employ under certain conditions. We also extend the dual-pathway model by showing how the individual perception of a meso-level factor shapes the effects of voice on well-being.

Second, our findings have implications for theorizing on job insecurity. Our study demonstrates the benefits of integrating the literature on voice, which has focused on voice as an outcome, with the literature on job insecurity, a key employment-related condition under which employees engage in voice and that employees can hardly influence themselves. We show that job insecurity is a relevant boundary condition of the relationship between voice and fatigue, but not of the relationship between voice and vigour. The current models of job insecurity do not account for such dynamic relationships. They predominantly position job insecurity as an antecedent hindrance stressor and, if at all, consider voice only as an outcome. Our results refine this view on job insecurity by suggesting that it can act as a moderator that may interfere with some underlying mechanisms.

Third, we show that voice impacts changes in well-being, but not vice versa. That is, voice leads to increases in vigour and, when job insecurity is low, to decreases in fatigue, whereas occupational well-being does not seem to enhance (or reduce) voice. This finding stands in contrast to previous theorizing and research suggesting that activated positive affect is a key predictor of proactive behaviours such as voice (e.g. Bindl *et al*., 2012; Carnevale, Huang and Harms, 2018; Schmitt, Belschak and Den Hartog, 2017). The reasons for this dissent could be investigated in future research.

In terms of practical implications, our results suggest that voice mainly benefits employee well-being. Hence, organizations should create possibilities for speaking up at work while working towards conditions that enable individuals to experience job security. Furthermore, supervisors should not actively encourage or expect employees who are experiencing job insecurity to speak up. A practical example of how voice can be promoted is 'participatory organizational research', in which the perspectives of unheard organizational members are included in knowledge production to advance theory and concrete practical organizational changes (see Burns *et al*., 2014 for an example).

Limitations and future research

This study has a number of limitations that could be addressed in future research. First, we

studied voice as a narrow phenomenon, focusing exclusively on voice as an individual behaviour (Barry and Wilkinson, 2016; Wilkinson, Barry and Morrison, 2020). This has been criticized more than once as an isolated approach to the construct that does not take fundamental hierarchies into account (e.g. Wilkinson, Barry and Morrison, 2020). Even though we think that our conclusions can be useful for other traditions of voice research, they are not altogether generalizable to other kinds of voice, such as voice through collective organization (Barry and Wilkinson, 2016). The conceptual model by Mowbray and Wilkinson (2015) displays which kinds of antecedents, contents and channels of voice could be considered in future research to be able to account for the full picture of employee voice in organizations.

Second, and in line with the first aspect, our approach to voice is limited as it suggests a stable level of voice. However, even though voice is a feature of an individual, it is also episodic, in that it necessitates aspects employees want to speak up about as well as opportunities to act (Detert and Edmondson, 2011). Supervisors and colleagues can be disapproving (Frese and Fay, 2001). However, only little research has focused on reactions to voice behaviour and how the meaning of voice can change depending on context, including the ensuing behaviour of significant others (see Ng and Feldman, 2012 for an exception, reflecting on meaning of voice). Future research should explicitly address these dynamic aspects of voice to more fully account for the complex phenomenon of voice. Research designs using multiple measurements or diary studies allow the examination of changes in voice and more rigorous tests of potential reverse effects of well-being on voice.

Third, we used a unidimensional measure of voice in our study. However, more recent research suggests that individual voice is a multidimensional construct (Van Dyne, Ang and Botero, 2003) and can, for example, be differentiated into prohibitive and promotive voice (Chamberlin, Newton and Lepine, 2017). Prohibitive voice has been depicted as riskier and more likely to elicit negative responses from others (Chamberlin, Newton and Lepine, 2017; Starzyk, Sonnentag and Albrecht, 2018). This suggests that future research should explore whether prohibitive and promotive voice affect well-being distinctively.

Fourth, the average level of job insecurity was rather low in the current study ($M = 1.88$ on a five-point scale). Therefore, floor effects may have led to statistical biases (e.g. Austin and Brunner, 2003; McBee, 2010). We examined our models with a subsample of $N = 142$ employees who reported relatively high levels of job insecurity (i.e. a score of 3 or higher on a five-point scale). However, using this smaller subsample, the fit of the direct effects model (Model 1) was not satisfactory (i.e. CFI/TLI < 0.90, RMSEA > 0.08), and the models with interaction and reverse effects (Models 2 and 3) did not converge. Moreover, in the model with direct effects, we did not find significant effects of voice and job insecurity on changes in vigour or fatigue. Further related to the measurement, common method bias could also result from relying exclusively on self-report data (Podsakoff *et al.*, 2003). However, to address the latter concern, we separated our predictor and outcome variables by a time lag of three months and controlled for baseline levels in the outcomes.

Fifth, even though we found partial support for the dual-pathway model, we still do not know enough about the underlying processes. Our model did not measure the proposed mediating mechanisms of basic need satisfaction and resource depletion, even though our hypotheses and interpretation rely on them. Models of voice and well-being need to account for several process variables to gain a realistic understanding of the phenomenon (Zacher *et al.*, 2019). Future research should replicate our assumptions using an explicit moderated-mediation model that measures the satisfaction of basic needs and resource depletion. Finally, drawing on the line of reasoning of Sherf *et al.* (2020), it would be very promising to investigate whether direct effects can be found for silence on fatigue but not on vigour.

Conclusion

The effects of employee voice on occupational well-being outcomes have been neglected. Our study found that speaking up at work can benefit employees by increasing vigour and, when job insecurity is low, decreasing fatigue. However, voice can also lead to increases in fatigue when job insecurity is high. Organizations should create opportunities for speaking up while creating safe

workplaces to prevent negative consequences of voice for employees.

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Supporting Information

Additional supporting information may be found online in the Supporting Information section at the end of the article.

Supplementary Material