MORE DEPLETION, LESS VOICE? THE ROLE OF IMPLICIT VOICE THEORIES

AND VOICE EFFICACY

ABSTRACT

To reconcile prior mixed findings on the relationship between ego depletion and voice, this study introduces self-protective implicit voice beliefs as the key between-level boundary condition that determines whether ego depletion reduces voice. Based on the Quad process model, this study proposes a mediated moderation model and simultaneously considers the effect of implicit voice beliefs and ego depletion when predicting voice behavior. Data was collected from 128 employees across ten work days using an experience sampling methodology. The results indicated that self-protective implicit voice beliefs (SIVBs) moderated the relationship between daily ego depletion and daily voice such that the relationship was more negative when SIVBs were high, but turned insignificant when SIVBs were low. In addition, daily voice efficacy mediated the interaction effect of ego depletion and SIVBs on daily voice. Theoretical and practical implications of these findings were also provided.

Keywords: Ego depletion; self-protective implicit voice belief; voice; voice efficacy

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Voice behavior, the proactive communication of opinions or suggestions that intends

to improve organizational functioning, has been widely demonstrated to be beneficial to

organizational effectiveness (Detert & Burris, 2007; Grant, 2013; Morrison, 2011; Van Dyne

& LePine, 1998). Despite of its potential benefits, employees also recognize that voice is an

extra-role and challenging behavior, as they need to go beyond the formal roles and even

undertake the risk of offending leaders (Burris, 2012; Van Dyne & LePine, 1998). Given the

resource demanding and risk-taking nature of voice, previous literature has revealed that self-

regulatory resource and self-control are essential in regulating employees' voice process,

which, if insufficient or impaired (also called *ego depletion*), would heavily interfere their

functional engagement in voice behavior (Koopmann, Johnson, Wang, Lanaj, Wang, & Shi,

2019; Lin & Johnson, 2015).

Regarding the depletion – voice relation, there are two convergent predictions. Some

researchers who supported "more depletion - less voice" argument emphasized the resource

demanding nature of voice, and posited that when employees were depleted, they would not

have enough self-regulatory resources to be allocated to this extra-role behavior (Lin &

Johnson, 2015). Meanwhile, other researchers emphasized employees' failure and inability to

recognize the risks of voice because of decreased control, thus leading to "more depletion -

more voice" conclusion (Koopmann et al., 2019). The dual process are reasonable routines

and emphasize different regulatory resource requirements when engaging in voice behavior.

But both of them only capture the partial controlled process of voice decision making,

ignoring the automatic routines of behavioral decision making (i.e. the role of implicit

cognition in voice process), which may interfere individual's controlled process and plays a

more salient role under deletion state (Sherman, Gawronski, Gonsalkorale, Hugenberg, Allen,

& Groom, 2008; Wegner, 1994).

To better understand the actual influencing process of depletion on voice, following

the Quad framework which synthesizes both automatic and controlled processes to behavior

(Sherman et al., 2008), I integrate ego depletion theory (Baumeister, Heatherton, & Tice,

1994; Baumeister, Muraven, & Tice, 2000) and prior implicit theory research (Detert &

Edmondson, 2011) to explore how depletion and voice implicit theories can interact to

predict employee voice behavior. I propose that employees' implicit voice theory, which

associates the cognitive beliefs with environmental cues automatically, can influence their

concerns and resource allocation under depletion state (Detert & Edmondson, 2011).

Specifically, when employees hold the taken-for-granted beliefs that voice is risky or

inappropriate at work, even under depletion, they will have high motive to allocate their

limited resources to risky and resource evaluation, rather than voicing without consideration

(Sherman et al., 2008). But usually under such situation, they may also perceive they need

more resources to conquer the inner fear of voice, thus leading to less voice behavior.

However, when employees hold low levels of implicit voice theory, they are not induced by

such heuristics to associate risks and resources with voice, and thus will have less motive to

allocate their limited resources to risky and resource evaluation (Detert & Edmondson, 2011).

So I propose implicit voice theories as an important moderator in influencing voice decision

process under depletion state. Moreover, by integrating social cognition theory (Bandura,

1982, 1989), I further proposed the underlying cognitive mechanism (i.e. voice efficacy) in this process and explored why ego deleted employees with different voice implicit theories may have different levels of voice behavior.

As ego depletion typically fluctuate from day to day (Courtright, Gardner, Smith, McCormick, & Colbert, 2016; Gabriel, Koopman, Rosen, & Johnson, 2018; Johnson, Lanaj, & Barnes, 2014), in this study I examine the daily variance of ego depletion, and adopt a multi-level approach to examine the interplay of daily ego depletion and the implicit voice theories in voice decision process, as well as the potential mechanism in this process.

This study makes three theoretical contributions in the literature of voice and ego depletion. First, it enriches current understanding of the relationship between ego depletion and daily voice by incorporating the ego depletion theory (Baumeister et al., 1994; Baumeister et al., 2000) and implicit theories (Detert & Edmondson, 2011). By investigating how employees' ego deletion state can interplay with their stable implicit beliefs about voice to predict their daily voice behavior, we can have a more integrative understanding about the depletion-voice relationship. Second, this current work extends ego depletion theory by incorporating the individuals' implicit beliefs. Previous research has shown that implicit theories of self-regulatory resources would influence the negative effects of ego depletion (Chow, Hui, & Lau, 2015; Job, Bernecker, Miketta, & Friese, 2015), but the current study proposes that the implicit theories of a specific action (i.e. voice) may reshape the effect of ego depletion in voice decision process. Third, by integrating social cognitive theory (Bandura, 1982, 1989), this study further revealed the potential cognitive mechanism to explain why ego depletion can interact with cognitive beliefs to affect voice behavior. Figure

1 depicts the full conceptual model.

Insert Figure 1 about Here

THEORETICAL BACKGROUND AND HYPOTHESES DEVELOPMENT

Automatic and Controlled Processes to Behavior

Automatic processes and controlled process are two important process in many areas of psychology, like memory (e.g., Jacoby, 1991)), judgment and decision making (e.g., Ferreira, Garcia-Marques, Sherman, & Sherman, 2006; Kahneman, 2003), as well as reasoning and problem solving (e.g., Sloman, 1996). Automatic process usually describes simple associations or habitual responses to environmental cues without much intention or awareness. It requires little resources, and is hard to halt once initiated (Sherman et al., 2008). By contrast, controlled process often needs much information to provide accurate judgements. It requires much intention and resources to enact. When it comes to the automatic and controlled processes to behavior, researchers usually use so-called dual-process model to understand the enactment of behavior (Chaiken, 1980).

However, in previous literature, the control/automatic process may represent different meanings. For some circumstances, control refers to one's ability to attend to and allocate resources to produce accurate judgements and appropriate behaviors (accuracy; e.g., Epstein, 1994); while in other circumstance, control is used to inhibit inappropriate/incorrect responses (suppression; e.g., Baumeister et al., 2000). So as the automatic process. Some literature posits it is generated automatically, and can interfere individuals' controlled process (e.g., Zajonc, 1980); while other literature takes automatic processes as the secondary source of responding which functions only when control fails (e.g., Jacoby, 1991).

To provide a integrative picture of these proposed process, Sherman et al. (2008)

synthesized the four processes above and proposed the Quad model, which suggested four relevant components to predict behavior: (a) the activation of an impulsive behavioral response tendency (activation); (b) the ability to detect contextual evidence to generate a correct response (detection), (c) if needed, successfully overcoming impulsive/automatic behavioral tendencies (overcoming bias); (d) general guessing/response biases (guessing). Integrating both controlled and automatic routines to behavior, the Quad model provided a good framwork to understand the emergence of voice behavior, which is affected not only by individuals' controlled analysis (Avery & Quiñones, 2002; Withey & Cooper, 1989), but also by their automatic impulse (Detert & Edmondson, 2011; Lam, Rees, Levesque, & Ornstein, 2018).

Self-regulatory Perspective and The Quad Framework of Voice Process

Given the extra-role and challenging nature of voice, previous literature has revealed that self-regulatory resource and self-control are essential in regulating employees' voice process (Koopmann et al., 2019; Lin & Johnson, 2015). These resources, once insufficient or impaired, could heavily interfere their functional engagement in voice behavior (Koopmann et al., 2019; Lin & Johnson, 2015). *Ego depletion,* a temporary state of diminished self-regulatory resource (Baumeister, Bratslavsky, Muraven, & Tice, 1998; Baumeister & Vohs, 2018), represents such situation exactly. From self-regulatory perspective, previous literature provided two different predictions about employees' voice behavior under depletion state.

One prediction was "more depletion - less voice" argument, which emphasized the resource demanding nature of voice, and posited that when employees were depleted, they would not have enough self-regulatory resources to be allocated to this extra-role behavior (Lin & Johnson, 2015). This prediction in general is consistent with the accuracy-type control I stated earlier, as only with certain self-regulatory resources can employees be capable to engage in voice behavior. Meanwhile, the other prediction was "more depletion - more voice"

argument, as it emphasized employees' failure and inability to recognize the risks of voice because of decreased control, thus leading to more voice behavior without further consideration (Koopmann et al., 2019). This prediction implicitly involves not only the accuracy-type control, but also suppression-type control, for it presumes that employees may suppress their voice tendency when the analyzing results reveal it is risky. Both processes are reasonable and they emphasize different role of regulatory resource associated with voice process. But both of them only captured the partial controlled process regarding voice decision making, leaving automatic routines of behavioral decision making (i.e. the role of implicit cognition in voice process) underexplored.

Based on Quad Framework, the automatic process of behavioral decision making (i.e. the role of implicit cognition in voice process) is an essential component to predict behavior, which can interfere and interact with individual's controlled process to affect behavior (Sherman et al., 2008). Actually, previous literature has demonstrated that the automatic response may play a more salient role under deletion state (Sherman et al., 2008; Wegner, 1994). Thus, to better predict employees' voice behavior under depletion state, I think it necessary to simultaneously consider employees' implicit voice belief and their self-regulations process under depletion.

From the perspective of the Quad model, whether employees will engage in voice behavior or not would depend on the following: (a) the activation of implicit beliefs regarding voice (Activation); (b) the general ability to evaluate and engage in voice behavior (Detection); (c) the successful replacement of previous behavioral tendency induced by implicit beliefs when it is inconsistent with correct evaluations (Overcoming bias); (d) a general response bias to guess whether or not to engage in voice behavior when there is no other source of information (Guessing). Rather than addressing automatic and controlled process respectively, this framework can explain the integrative effect of employees' implicit

cognition and current resource state on voice behavior.

The Interaction Effect of Implicit Beliefs and Ego Depletion in Voice Process

Self-protective implicit theories of voice (SIVBs), which refers to "knowledge structures that individuals use to avoid trouble that could arise from speaking up to authorities" (Detert & Edmondson, 2011: 462), determine employees' automatic evaluation process about voice in the workplace. Through an inductive and deductive analysis, Detert and Edmondson (2011) identified five SIVBs: (a) presumed target identification, an implicit belief that managers are identified with the status quo and that managers regard voice as personal criticism; (b) need solid data or solutions to speak up, there must be complete solutions before voice; (c) do not bypass the boss upward, a belief that voice in front of supervisors' superiors will be seen as unacceptable; (d) do not embarrass the boss in public, a belief that supervisors do not want to be challenged in front of others without private notice; and (e) negative career consequences of voice, a belief that voice has negative career repercussions caused by supervisors' retaliation.

Based on Quad framework, I propose that SIVBs may interfere the controlled process of voice decision making when employees are depleted. Specifically, when depleted employees' SIVBs are high, they will have the following responses: (a) they will first effortlessly connect cues embedded in voice settings with risks and resources loss, and make a quick prior prediction that voice is risky and resource-demanding, which will inhibit their voice behavior automatically (AC) (Detert & Edmondson, 2011); (b) as they are depleted, there is not enough regulatory resources that can be used for risk and resource evaluation or voice engagement (reduced capability). If there remains any, (provided other conditions are same) they would have relatively higher intention to check whether it is risky to engage in voice because of high SIVBs, rather than engage in this resource-demanding activity directly. But usually, they are more inclined to confirm the risky information when depleted (D)

(Furnham, 1988; Levy, Chiu, & Hong, 2006; Wyer, 2004); (c) As detection is either failed or tend to be consistent with previous behavioral impulse, these is little need to overcome bias (OB); (d) as association is activated, there is no need to guess (G). Thus, in general, when depleted employees' SIVBs are high, they are less likely to engage in voice behavior.

In contrast, when depleted employees' SIVBs are low, they will have the following responses: (a) there is less association between cues embedded in voice settings with risks and resources loss, and employees may perceive voice as less risky or resource-demanding. The automatic effect induced by implicit voice beliefs is weak (AC); (b) as they are depleted, there is not enough regulatory resources that can be used for risk and resource evaluation or voice engagement (reduced capability). If there remain any, (provided other conditions are same) they may engage in voice directly, rather than putting effort to weigh the negative consequences of voice because of low SIVBs (Detert & Edmondson, 2011). Thus, compared to depleted employees with high SIVBs, depleted employees with low SIVBs are more likely to engage in voice directly (D); (c) Employees have low motive to detection and thus there is no need to overcome bias (OB); (d) as no association is activated and a correct response is not determined carefully, one may be affected by systematic bias in choosing whether to voice a not.

Based on arguments above, I propose the following hypothesis:

Hypothesis 1: SIVBs moderates the relationship between daily ego depletion and daily voice, such that the relationship is more negative when SIVBs are high, but turns less negative when SIVBs are low.

The Mediating Role of Daily Voice Efficacy

Based on Gist and Mitchell's work (Gist & Mitchell, 1992), one's assessment of specific task requirements and personal resources is very important in shaping his/her efficacy. I propose that SIVBs may moderate the effect of ego depletion on voice, for several

reasons. First, depleted employees with high (compared to low) SIVBs has low levels of confidence in facing the potential risks of voice. When depleted employees have high (compared to low) SIVBs, automatic process is more likely to be salient, which connects voice behavior with many potential negative consequence, such as risks and resource cost. As employees are depleted, they have less resources that can be used to detect the environment correctly, and thus more likely to follow the automatic process (Sherman et al., 2008). Even if there are some residual regulatory resources, employees' high (compared to low) SIVBs will also induce them to confirm the risky information within environment. These negative cues and information can heavily undermine employees' confidence in facing the potential risks of voice (Milliken, Morrison, & Hewlin, 2003).

Second, depleted employees with high (compared to low) SIVBs perceive low levels of personal resources that can be used for voice. When employees are depleted, the regulatory resources that can be used to evaluate environment and engagement in voice behavior is lacked (Lin & Johnson, 2015). If their SIVB is high (compared to low), they are more likely to allocate their limited resources to evaluate whether it is risky to engage in voice, rather than allocating to voice behavior directly (Detert & Edmondson, 2011), thus rendering the resources left for voice engagement even less.

Finally, depleted employees with high (compared to low) SIVBs perceive low levels of enactive mastery of voice. As I stated earlier, because of the lack of resources, when one is depleted, the detection process is weakened. Even they allocate some resources to detection, high SIVBs may make they more likely to confirm the negative information associated with voice, rather than generating positive information (e.g. past positive experience, positive expectation and illusion) about voice (Wyer, 2004), which is critical to shape voice efficacy.

Based on the argument above, the proposed the following hypothesis:

Hypothesis 2: SIVBs moderates the relationship between daily ego depletion and daily voice efficacy, such that the relationship is more negative when SIVBs are high, but turns less negative when SIVBs are low.

Self-efficacy is an important cognitive processes considered in self-regulation (Gist & Mitchell, 1992) and voice efficacy is one of the key judgments that influences whether employees would speak up. The existence of higher domain-specific efficacy means that individuals believe they can succeed despite of the challenges and risks inherent in performing specific activity (Bandura & Cervone, 1986). When employees have high voice efficacy, they tend to feel that they can voice effectively and that their voice will be taken seriously (Kish-Gephart, Detert, Treviño, & Edmondson, 2009). Based on these arguments and Hypothesis 2, I argue that voice efficacy function as the pivotal mechanism in explaining why depleted employees with high SIVBs will have less voice. This leads us to propose the following hypothesis:

Hypothesis 3: Daily voice efficacy mediates the moderating effect of SIVBs in the daily ego depletion - voice relationship.

METHOD

Participants and Procedures

Experience sampling methodology (ESM) was used to examine the daily fluctuations of within-person effects of ego depletion on voice efficacy and voice. In particular, 150 participants from a manufacturing company in China were recruited to complete an initial online registration survey and a paper-and-pencil daily survey (at the end of the workday) across 10 consecutive days. The registration survey included measures of SIVBs and demographics. The daily survey included measures of positive affect, negative affect, ego depletion, voice efficacy and voice. Participants were compensated 10 RMB (about 1.44 $)

for completing each daily survey. There were 18 participants who did not complete the initial online registration survey and 4 participants quit on the second day, that is, a total of 128 employees participated in this study (response rate = 85.3%). 52 invalid daily surveys were removed due to too much missing data on ego depletion and voice efficacy. Finally, the sample for analyses included 1228 total observations out of a possible 1280, yielding a daily response rate of 81.9%. The average number of days completed by per participant was 9.6 (ranging from 7 to 10). The average age of the participants was 32.0 years old ($SD = 7.9$). Among participants, 40.6% were female and 55.5% held a bachelor's degree or higher. They have an average organizational tenure of 8.4 years ($SD = 12.2$) and an average dyadic tenure with leader of 4.7 years ($SD = 7.8$).

Measures

All measures were translated into Chinese by two researchers conversant in both languages, and then back-translated to ensure the accuracy of the translation (Brislin, 1986). All the scales range from 1 = *strongly disagree* to 7 = *strongly agree*.

Daily ego depletion. Daily ego depletion was assessed with a five-item measure from Christian and Ellis' (Christian & Ellis, 2011) state self-control capacity scale. It was frequently used in previous depletion literature (e.g., (Fehr, Yam, He, Chiang, & Wei, 2017; Lanaj, Johnson, & Barnes, 2014). Each day, participants rated the extent to which they agreed with each item. An example item was, "Today, I felt like my willpower was gone".

Daily voice efficacy. Daily voice efficacy was assessed with the adapted six-item measure from Morrison et al.' (Morrison, Wheeler-Smith, & Kamdar, 2011) voice efficacy subscale of group voice climate and, items were modified to reflect the daily nature of the survey. Each day, participants were asked to report the extent to which they agreed with each item. An example item was, "Today, I was capable of effectively getting involved in issues that affect the quality of work life in my group".

Daily voice. Daily voice behavior was measured using Van Dyne and Lepine's (Van Dyne & LePine, 1998) six-item measure. To capture within-person variations, items were modified slightly to reflect the participants' daily experiences at work. An example item was, "Today, I made constructive suggestions to improve the unit's operation". Each day, participants were asked to report the extent to which they agreed with each item.

SIVBs. The 20-item scale developed by Detert and Edmondson (Detert & Edmondson, 2011) was used to measure employee's SIVBs. Participants were asked to indicate the extent to which they agreed with each item. An example item was, "Pointing out problems, errors, or inefficiencies might very well result in lowered job evaluations".

Control variables. To rule out the potential confounding effects of affect, I controlled for within-person positive affect and negative affect with ten-item measures from Watson, Clark, and Tellegen (Watson, Clark, & Tellegen, 1988). Each day, participants indicated the extent to which they had felt each of the states, sample items included "excited" and "afraid".

Analytic Approach

Given the nested data structure, the multilevel modeling was used to account for between- and within-person effects simultaneously in the analyses. I used Mplus 8.3 (Muthén & Muthén, 2019) with robust maximum likelihood estimation to analyze the proposed model. This method decomposes the variance into within- and between-person components and could provide unbiased parameter estimated at the within-person level (Preacher, Zyphur, & Zhang, 2010), and it also allows us to test the cross-level moderating effects of a between-person variable on the within-person level effects. As is recommended by Preacher et al. (2010), error variances and correlations were not constrained to be fixed. The between-person variable (SIVBs) was grand-mean centered and the within-person variables (ego depletion, positive affect and negative affect) were group-mean centered. Following Edwards and Lambert's (Edwards & Lambert, 2007) approach, I use the Monte Carlo simulation

procedures to compute the conditional indirect effects and generated the 95% confidence intervals.

RESULTS

Before testing the proposed hypotheses, I conducted a series of multilevel confirmatory factor analysis (MCFA) to confirm the hypothesized six-factor model (daily ego depletion, daily voice efficacy, daily voice, SIVBs, daily positive affect and daily negative affect). To keep the measurement model parsimonious, I employed a parceling technique (Williams & Anderson, 1994) to create five indicators for SIVBs based on its five dimensions. Results indicated that the six-factor model had a good fit with the data ($\chi^2(319) = 957.79$, $p < .001$, CFI = .91, TLI = .90; RMSEA = .04; SRMR$_{within}$ = .07, SRMR$_{between}$ = .05) and it demonstrated better than a five-factor model grouping voice efficacy and voice ($\chi^2(323) = 1628.23$, $p < .001$, CFI = .82, TLI = .80; RMSEA = .06; SRMR$_{within}$ = .08, SRMR$_{between}$ = .05, $\Delta\chi^2 = 175.39$[1], $\Delta df = 4$, $p < .001$), and a four-factor model grouping ego depletion, voice efficacy and voice ($\chi^2(326) = 2800.10$, $p < .001$, CFI = .66, TLI = .63; RMSEA = .08; SRMR$_{within}$ = .12, SRMR$_{between}$ = .05, $\Delta\chi^2 = 5776.34$, $\Delta df = 7$, $p < .001$). These results demonstrate the discriminant validity of the focal variables.

Descriptive Statistics and Correlations

Means, standard deviations, reliabilities and zero-order bivariate correlations for the variables were presented in Table 1. Null models revealed that there was a considerable proportion of within-person variance for each daily variable (i.e., daily ego depletion = 43.4%, daily voice efficacy = 32.5%, daily voice = 41.0%, daily positive affect = 35.5%,

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[1] The Satorra-Bentler scaled chi-square difference tests were applied in the comparisons between models (https://www.statmodel.com/chidiff.shtml).

daily negative affect = 42.6%). These results indicated that the multilevel modeling was

needed for the data.

Insert Table 1 about Here

Hypothesis Testing

Hypothesis 1 predicted that SIVBs would moderate the relationship between daily ego

depletion and daily voice. To test this cross-level moderation, I ran a multilevel moderation

model with random slope. As shown in the Table 2 (Model 1), the cross-level interaction term

(daily ego depletion*SIVBs) was negatively related with daily voice (B = -.09, t = -2.17, p

= .03). Figure 2 showed the interactive effect of daily ego depletion and SIVBs on daily

voice. Following Dawson and Richter (Dawson & Richter, 2006), I tested the simple slopes.

As is predicted in Hypothesis 1, the direct effect of daily ego depletion on daily voice was

negatively significant when SIVBs were high (B = -.18, t = -2.70, p = .01) but non-significant

when SIVBs were low (B = .00, t = .09, p = .93), supporting Hypothesis 1.

Insert Table 2 and Figure 2 about Here

Hypothesis 2 predicted that SIVBs moderated the relationship between daily ego

depletion and daily voice efficacy, such that the relationship is more negative when SIVBs

are high, but turns less negative when SIVBs are low. To test this hypothesis, I ran a

multilevel moderated mediation model with random slope (only the relationship between

daily ego depletion and daily voice efficacy was random). As shown in the Table 2 (Model 2),

the cross-level interaction term (daily ego depletion*SIVBs) was significant on daily voice

efficacy (B = -.09, t = -2.05, p = .04). Figure 3 showed the interactive effect of daily ego

depletion and SIVBs on daily voice efficacy. The results of simple slope tests indicated that

the direct effect of daily ego depletion on daily voice efficacy was negatively significant when SIVBs were high (B = -.18, t = -2.58, p = .01) but non-significant when SIVBs were low (B = .00, t = .01, p = .99), supporting Hypothesis 2.

Hypothesis 3 suggested that daily voice efficacy mediated the moderating effect of SIVBs in the daily ego depletion-voice relationship. As is shown in Table 2 (Model 2), daily voice efficacy was positively related with daily voice (B = .25, t = 3.82, p < .001). To test the mediated moderation effect, I used the Monte Carlo simulation (20,000) procedures to compute the conditional indirect effects and their difference. The indirect effect between daily ego depletion*SIVBs on daily voice via daily voice efficacy was -.02, 95% CI = [-.049, -.001]. Thus, Hypothesis 3 was supported.

DISCUSSION

Sufficient self-regulatory resource has been regarded as an important factor that enables employee to speak up (Lin & Johnson, 2015). However, some research suggests that employees can speak up more under depletion state (e.g., (Koopmann et al., 2019; Mackey, Huang, & He, 2018; Qin, DiRenzo, Xu, & Duan, 2014). In the current research, I theorized that the SIVBs were the key moderating factors between ego depletion and voice. The results suggested that not all employees would reduce voice when they are depleted. For employees with high levels of SIVBs, ego depletion would reduce voice significantly; while for employees with low levels of SIVBs, ego depletion did not have significant effect on voice behavior. These findings have important theoretical and practical meaning.

Theoretical Contribution

This study has several implications for theory development. First, based on Quad Process Framework, I investigated the how automatic and controlled process function together to predict voice behavior, resolving the previous inconsistent findings regarding

depletion – voice relation. Specifically, by integrating incorporating the ego depletion theory (Baumeister et al., 1994; Baumeister et al., 2000) and implicit theories (Detert & Edmondson, 2011), this study revealed how employees' ego depletion state can interplay with their stable implicit beliefs to predict their daily voice behavior, which enriched our current understanding of the emergence of voice behavior.

Second, this current work extends ego depletion theory by incorporating the individuals' implicit beliefs. Previous research has shown that implicit theories of self-regulatory resources would influence the negative effects of ego depletion (Chow et al., 2015; Job et al., 2015), but this study proposes that the implicit theories of a specific action (i.e., voice) may reshape the effect of ego depletion in voice decision process. The findings of this research revealed that when suffering ego depletion, those employees who hold high SIVBs will experience a low level of voice efficacy. But for those with low SIVBs, voice efficacy will not decline significantly even when they are depleted. These results may be fruitful for our understanding about the nature of ego depletion and its effects at work.

Third, by integrating social cognitive theory (Bandura, 1982, 1989), this paper provided an explanation for why depleted employees with high SIVBs reduce their voice. Although some scholars have explored the effects of depletion on voice (e.g., Lin & Johnson, 2015), they did not examine the underlying psychological process between ego depletion and voice. As clarifying this process can make the existing mixed results less confusing, the current research takes a step forward by testing the mediating role of voice efficacy. In particular, the current findings indicated that for employees with high levels of SIVBs, when they are depleted, their voice efficacy will be undermined which in turn reduces their voice behavior. These findings extend our understanding of the psychological processes underlying ego depletion and voice

Finally, this paper advances social cognitive theory (Bandura, 1982, 1989) on the

within-person level by examining the daily fluctuation of voice efficacy, as most previous self-efficacy research has merely focused on its between-person variance (e.g., Duan, Kwan, & Ling, 2014; Lee, Choi, Youn, & Chun, 2017; Wang, Gan, Wu, & Wang, 2015). This study offered a complement to the between-person paradigm of self-efficacy by introducing both daily ego depletion and stable SIVBs as important factors shaping individuals' voice efficacy. The results indicated that the voice efficacy indeed had a daily variance (33.0%), and it was negatively related with voice in the daily level.

Practical Implication

The managerial implications of the current findings are straightforward. The results indicate that the SIVBs may serve as important boundary conditions of the relationship between ego depletion and voice. As depleted employees with high SIVBs reduce voice heavily, managers should pay more attention to such this type of employees, such as those who hold high SIVBs, and also need to transit between work shifts. Although SIVBs are less likely to be influenced by the current contextual factors, they can be formed during work lives through both direct experience and vicarious learning (Detert & Edmondson, 2011). Thus, organization could set some courses to improve employees SIVBs gradually.

For employees with high levels of SIVBs, their voice efficacy will be heavily influenced under ego depletion. Therefore, organizations could do something to minimize employees' ego depletion to maintain their voice efficacy level. For example, given the sleep quality is a main factors inducing employees' ego depletion (Christian & Ellis, 2011), managers can set up some sleep improvement courses for the employees, especially for those with high levels of SIVBS. In addition, these employees can also adopt some strategic methods (e.g., use of caffeine and naps) to attenuate the depleting effects of poor sleep quality.

Limitation and Future Research Direction

Several limitations in this study are recognized that warrant future research. One is

that the data in this study was collected from the same resources and the daily surveys were not set out at separating times, which may promote the common method bias (Podsakoff, MacKenzie, & Podsakoff, 2012). But I also have taken several steps to reduce the common method bias. First, given employees' daily psychological state and behavior could be influenced by the state affect, I controlled for the daily positive affect and negative affect which may contribute to the method bias (Podsakoff et al., 2012). Second, I conducted a series of multilevel confirmatory factor analysis to demonstrate the data's fitness with the proposed model. The six-factor model presented a good fit which was better than other alternative models. Third, this model included a between-level moderator variable (i.e. SIVBs) that was collected in the registration survey and I found a significant cross-level interaction effect of SIVBs and ego depletion on voice efficacy. Based on Podsakoff et al.' (Podsakoff et al., 2012: 564) arguments, the method bias "cannot inflate (but does deflate) quadratic and interaction effects", therefore I believe the method bias would not account for the significant cross-level interaction effects. Based on this limitations, future researchers can utilize complementary methods (e.g., collecting data from different resources and multiple time points; using experiments) to help reduce the concern of common method bias and improve our understanding of the effects of ego depletion on voice (Podsakoff et al., 2012).

Another limitation is that this study only considers one type of implicit theory (i.e., SIVBs) as a boundary condition that affects the ego depletion effect on voice. It would be a good endeavor to identify other implicit theories or other personal habits in influencing depleting effects. For example, Lam et al. (2018) proposed that some employees might have a voice habit or the automatic routines to express suggestions or opinions intended to benefit organization. When these employees are depleted, they are more likely to conform to their voice habit, and may need extra self-control resources to inhibit such voice habit/tendency. Future research can explore this between-individual habit as potential moderators of the

relationship between ego depletion and voice.

Finally, the generalizability of the current findings may be limited by the Chinese sample. Given China's collectivistic and high power distance culture, employees may be less likely to speak up to challenge the power holders. These culture characteristics may influence the moderating role of SIVBs. Future research can collect data from other culture to cross-validate these findings. In addition, under the collectivistic and high power distance culture, confirming the collective and power holders may have special meanings to employees. So future researchers are encouraged to develop the indigenous measures of SIVBs in Chinese culture. I believe the in-depth scales could help us to more fully understand the construct and structure of SIVBs.

CONCLUSION

Ego depletion may not always reduce voice. Whether depleted employees speak up or not depends on the implicit beliefs of voice these employees hold. Using a diary study, this research showed that employee voice was influenced by ego depletion only for those employees with high levels of SIVBs. When these employees are depleted, their voice efficacy would be eroded, which in turn reduces their voice behavior. I hope this research and current findings will encourage future research to consider employee voice efficacy and voice behavior at the within-person level and further examine more employee characteristics as possible contingency influencing the effects of ego depletion on voice.

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EGO DEPLETION, IMPLICIT VOICE BELIEFS AND VOICE

TABLE 1

Descriptive Statistics and Correlations

Variables	Mean	SD$_{within}$	SD$_{between}$	1	2	3	4	5	6
1. Daily Ego Depletion	2.71	1.13	.89	**(.90)**	-.48**	-.50**	-.29**	.66**	-.07
2. Daily Voice Efficacy	4.93	1.07	.91	-.39**	**(.93)**	.83**	.61**	-.38**	.05
3. Daily Voice	4.73	1.03	.82	-.38**	.68**	**(.92)**	.67**	-.36**	.02
4. Daily Positive Affect	3.84	1.06	.88	-.27**	.51**	.54**	**(.73)**	-.04	-.01
5. Daily Negative Affect	2.32	.91	.72	.50**	-.28**	-.28**	-.01	**(.80)**	-.02
6. SIVBs	3.11	.43	.44	-.06*	.04	.02	-.01	-.02	**(.83)**

Note: n = 1228 at the daily level. N = 128 at the individual level. Correlations under the diagonal represent the within-person correlations; correlations above the diagonal represent the between-person correlations. Correlations between daily variables and SIVB were computed by aggregating the daily scores and correlating them with SIVBs. The coefficients in the parentheses on the diagonal are Cronbach's alpha coefficients.

* $p < .05$

** $p < .01$

TABLE 2

**Path Analysis Results for Testing Hypotheses**

Predictors	Dependent Variables					
	Model 1		Model 2			
	Daily Voice		Daily Voice Efficacy		Daily Voice	
	B	SE	B	SE	B	SE
Daily Positive Emotion	.31***	.05	.23***	.04	.25***	.05
Daily Negative Emotion	-.13***	.03	-.02	.03	-.11***	.03
Daily Ego Depletion	-.09*	.04	-.09*	.04	-.06	.04
SIVBs	.02	.07	.05	.07	-.02	.04
Daily Ego Depletion*SIVBs	-.09*	.04	-.09*	.04	-.08*	.04
Daily Voice Efficacy					.25***	.07

Note: n = 1228 at the daily level. N = 128 at the individual level.

* $p < .05$

*** $p < .05$

EGO DEPLETION, IMPLICIT VOICE BELIEFS AND VOICE
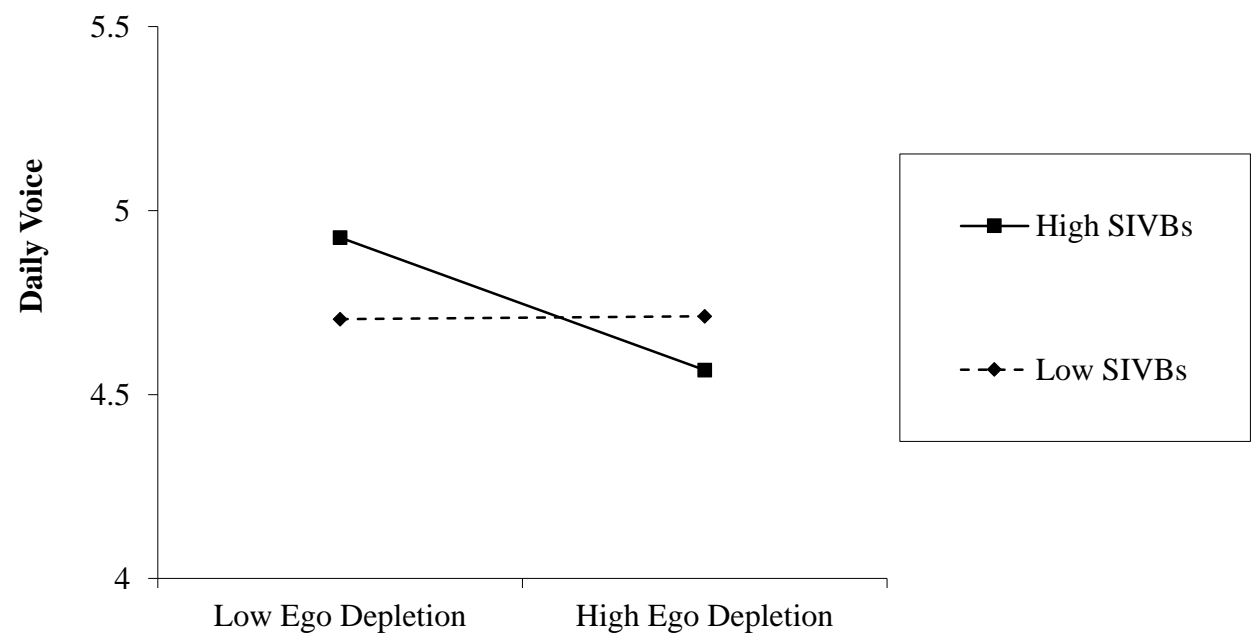
FIGURE 1
Theoretical Model
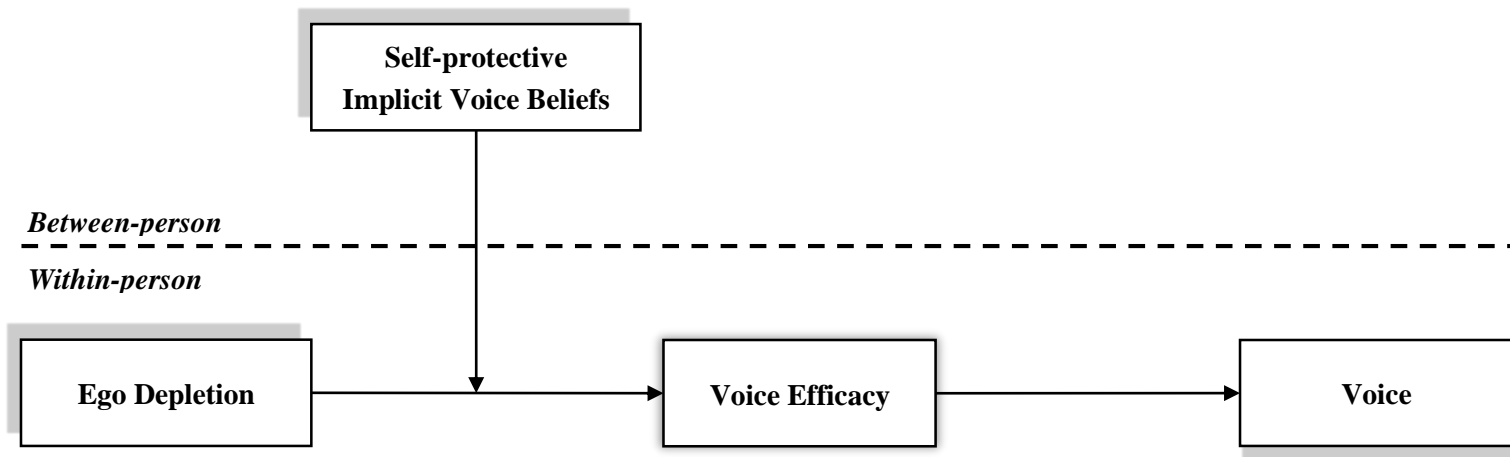
FIGURE 2

The Moderating Role of SIVBs on the Relationship between Daily Ego Depletion and Daily Voice

EGO DEPLETION, IMPLICIT VOICE BELIEFS AND VOICE

FIGURE 3

The Moderating Role of SIVBs on the Relationship between Daily Ego Depletion and

Daily Voice Efficacy