

Transformational Leadership and Employee Safety Performance: A Within-Person, Between-Jobs Design

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We investigated the extent to which the safety performance (i.e., self-reported safety compliance and safety participation) of employees with 2 jobs was predicted by their respective supervisors' transformational leadership behaviors. We compared 2 within-person models: a context-specific model (i.e., transformational leadership experienced by employees in 1 context related to those same employees' safety performance only in that context) and a context-spillover model (i.e., transformational leadership experienced by employees in 1 context related to those same employees' safety performance in the same and other contexts). Our sample comprised 159 "moonlighters" (73 men, 86 women): employees who simultaneously hold 2 different jobs, each with a different supervisor, providing within-person data on the influence of different supervisors on employee safety performance across 2 job contexts. Having controlled for individual differences (negative affectivity and conscientiousness) and work characteristics (e.g., hours worked and length of relationship with supervisor), the context-specific model provided the best fit to the data among alternative nested models. Implications for the role of transformational leadership in promoting workplace safety are discussed.

Keywords: moonlighting, safety, safety compliance, safety participation, transformational leadership

Despite attempts to improve workplace safety, high rates of job-related injuries persist worldwide (Hämäläinen, Takala, & Saarela, 2006), constraining many employees' physical capacity to work and negatively affecting their subsequent work-related attitudes and behaviors (e.g., Barling, Kelloway, & Iverson, 2003; Roberts & Markel, 2001). Gaining an understanding of the determinants of employee safety

performance that precede such injuries can potentially facilitate improvements to workplace safety (Neal & Griffin, 2006).

The first goal of the study was to extend existing research by investigating the influence of generalized transformational leadership on employee safety performance. In the present study, we conceptualized employee safety performance as a bidimensional, facet-specific aspect of job performance. Following prior research (e.g., Griffin & Neal, 2000), we suggest that employee safety performance can be operationalized as two types of safety behaviors: safety compliance and safety participation. *Safety compliance* refers to behaviors focused on meeting minimum safety standards at work, such as following safety procedures and wearing required protective equipment. *Safety participation* refers to behaviors that support workplace safety, such as helping coworkers with safety-related issues or voluntarily attending safety meetings. As such, safety compliance and safety participation parallel two types of general work performance: task performance and contextual performance, respectively (Borman & Motowidlo, 1997).

Our second goal was to examine whether transformational leadership motivates safety compliance and participation not only within the work context in

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which transformational leadership is experienced, but whether it provides a learning experience that translates into improved safety compliance and safety participation in another work context. In so doing, we investigate whether transformational leadership is a within-context motivator of employee safety performance, whether employees learn to adopt a higher standard of safety performance that transcends the work context, or both. We proposed two main models: one in which the effects of transformational leadership on employee safety performance are specific to the work context in which an employee and supervisor interact (i.e., context-specific), and one in which transformational leadership in one work context affects employee safety performance across multiple work contexts (i.e., context-spillover).

Transformational Leadership and Employee Safety Performance

Transformational leadership has received considerable conceptual and empirical attention in recent years (Bass & Riggio, 2006). Transformational leadership comprises four leader behaviors. *Idealized influence* is when leaders demonstrate high standards of moral conduct in their own behavior. *Inspirational motivation* occurs when leaders communicate a positive, value-based vision for the future state of the organization and its employees. *Intellectual stimulation* is when leaders encourage employees to challenge organizational norms and think creatively. Lastly, *individual consideration* is leaders recognize the unique needs of followers.

There are several lines of evidence showing that transformational leadership can influence employee safety compliance and safety participation. Transformational leadership can motivate superior employee task and extrarole performance by creating a positive vision of the organization's future, empowering employees, and placing importance on their needs (Conger & Kanungo, 1998). Empirical findings support the relationship between transformational leadership and enhanced task performance (e.g., Barling, Weber, & Kelloway, 1996; Howell & Avolio, 1993) and contextual performance (e.g., organizational citizenship; Koh, Steers, & Terborg, 1995). We argue that transformational leadership exerts the same effects on safety-specific performance, such as following rules and helping improve employee safety, by generating motivation to achieve positive change and prioritizing employee well-being. Zohar (2002) found that employees exposed to transformational

leadership had higher levels of safety compliance (as measured by earplug use) when compared with a control group, and Clarke and Ward (2006) found that transformational leadership was positively related to employee safety participation.

Several studies have found relationships between safety-specific transformational leadership (i.e., transformational leadership specifically focused on enhancing individual and organizational safety) and safety-related outcomes, including perceived safety climate, safety events, safety consciousness (Kelloway, Mullen, & Francis, 2006), and safety citizenship behavior (Conchie & Donald, 2009). However, several issues remain with safety-specific transformational leadership.

First, the salience of safety as an important outcome in the presence of safety-focused leaders is understandable; there is longstanding research (e.g., Cohen, 1977; Zohar, 1980) showing that organizations in which leaders take an active role in promoting safety enjoy better organizational safety records. Safety-specific transformational leadership, when used as the sole predictor of safety outcomes, confounds safety and transformational leadership; the possibility remains that a safety climate (Wallace & Chen, 2006; Zohar, 1980) rather than transformational leadership behaviors per se explains variance in employee safety performance.

Second, item content is shared across measures of safety-specific transformational leadership (e.g., Barling, Loughlin, & Kelloway, 2002) and employee safety performance (e.g., Neal, Griffin, & Hart, 2000) when predictor and criterion variables are collected from the same source (i.e., employees)—all of the scales contain derivatives of the word *safety* in every item—potentially inflating the relationship between predictor and criterion. One study (Mullen & Kelloway, 2009) has tested the relative effects of safety-specific and generalized transformational leadership training on employee safety performance, and found an increase in safety-specific transformational leadership behaviors in the safety-focused training group. However, it was less clear whether there was an increase in generalized transformational leadership in either training group, and the relationship between generalized transformational leadership and employee safety outcomes was not reported.

Third, testing the extent to which generalized transformational leadership predicts employee safety performance reflects the lived reality of supervisors whose daily priorities reflect a range of issues, and not safety alone. Thus, understanding the relationship between generalized transformational leadership and

employee safety outcomes not only avoids confounding predictor with criterion, but also more comprehensively reflects the way supervisors behave across a range of work situations and contexts.

Hypothesis 1a: Transformational leadership experienced by employees in one job is related to employees' safety compliance in that same job.

Hypothesis 1b: Transformational leadership experienced by employees in one job is related to employees' safety participation in that same job.

Context-Specific or Context-Spillover?

The question of whether the effects of transformational leadership on safety compliance and safety participation are specific to that leader (i.e., context-specific) or whether transformational leadership experienced in one job can affect safety compliance and safety participation in a different job (i.e., context-spillover) has practical and conceptual relevance.

In terms of practical relevance, 5.2% of employed people in the United States hold multiple jobs simultaneously (U.S. Bureau of Labor Statistics, 2006), and more than 7% work for different companies in the same time period or simultaneously work for an employer and contractor. More generally, individuals increasingly change jobs over their working lifetime (U.S. Department of Labor, 2006). Thus, whether experiences with a specific leader in one job affect employee behaviors in another job has social significance.

Conceptually, this question has implications for the generalizability of transformational leadership. Specifically, it addresses whether transformational leadership serves to help elicit safety performance from employees in a particular context, or whether it provides more generalized social learning that motivates employees to achieve higher safety performance across work contexts. Given that a transformational leader can generate employee enthusiasm for the future of the organization and a connection to the leader, employees may be motivated for high levels of safety performance exclusively in the context in which that leader–follower relationship exists. Evidence that individuals' behavior tends to be consistent within but not across contexts is substantial (Mischel & Shoda, 1999; Ross & Nisbett, 1991). This is also consistent with the notion that organizations are social systems that provide cues for the appropriateness of behaviors in a specific context (Salancik & Pfeffer, 1978). With respect to leadership, Lieberman (1956) and Conger (1989) suggested

that individuals distinguish their experiences with one leader from another leader, and thus the "routinization" of leadership is context-specific.

At the same time, experiences with leaders in one job may transcend context. Organizational leaders are socialization agents given that they introduce employees to the expectations of the workplace and broader norms about desired employee behaviors (Jablin, 2001). There is some evidence of sequential leader transference, whereby prior experiences with one leader can influence expectations of another leader, especially if the two leaders are similar (Ritter & Lord, 2007). Employees who feel motivated by their leaders to behave in a particular way may feel encouraged to behave in the same way in other contexts, from both a sense of consistency and moral autonomy (Maclagan, 2007). Thus, there is evidence for both the context-specific and context-spillover models, and we examined this as an exploratory research question.

Within-Person Differences and Employee Safety Performance

A methodological contribution of this research is its study design, which enables separation of the influence of multiple supervisors and individual differences on employee safety performance. First, with respondents providing perceptions of two concurrently held jobs, we examined the relationships of interest while holding within-person differences constant.

Second, we modeled negative affectivity and conscientiousness as theoretically relevant constructs related to employee safety performance. *Conscientiousness* is a stable trait that manifests itself through hard work, orderliness, and conformity (Hogan & Ones, 1997). Meta-analytic evidence demonstrates a positive relationship between conscientiousness and safety-specific performance (Christian, Bradley, Wallace, & Burke, 2009). A positive association has also been found between conscientiousness and general contextual performance (e.g., Witt, Burke, Barrick, & Mount, 2002). As such, conscientious employees are more likely to exhibit safety participation.

Negative affectivity refers to the chronic experience of negative emotional states, feelings of nervousness and worry, and perceiving events in a negative light (Watson & Clark, 1984). Although no previous research has focused on a link between negative affectivity and either safety compliance or

safety participation at the individual level of analysis (cf. Neal & Griffin, 2006), negative affectivity has been positively related to workplace injuries (Iverson & Erwin, 1997), as well as with lower task and contextual performance (Kaplan, Bradley, Luchman, & Haynes, 2009). We suggest that negative affectivity is related to safety compliance and safety participation.

Method

Participants and Recruitment

We sent recruiting advertisements to 3,600 employed people via Study Response, an online research service run by Syracuse University. We used a sample that cut across many occupations because it was not possible to isolate a readily identifiable population of moonlighters. At the time of data collection, Study Response had a roster of more than 95,000 members reflecting the U.S. population in terms of ethnic background and education.

We invited individuals to participate in the study if they simultaneously held two jobs with a different supervisor in each job. Of those, 159 people (M age = 37.4 years, SD = 10.25; 73 men, 86 women) self-identified as moonlighters and completed the questionnaire. Given that 5% of people in the United States hold two jobs simultaneously (U.S. Census Bureau, 2006), we estimate that approximately 180 of the 3,600 people contacted were eligible to participate, yielding a conditional response rate of 88.3%. Respondents worked an average of 38.2 hr per week in their "primary jobs" and 17.8 hr per week in their "secondary jobs." Participants' primary jobs included blue-collar work (12.8%; e.g., auto repair, farm work, janitor), clerical work (16.0%; e.g., secretary, receptionist), managerial work (9.6%), professional work (22.4%; e.g., attorney, engineer, consultant), technical work (25.6%; e.g., IT jobs, lab technician), sales and service (11.6%; e.g., sales, retail, customer service), and semiprofessional work (2.0%; e.g., chef, educational counselor). Participants' secondary jobs included blue-collar work (20.7%), clerical work (10.7%), management (7.1%), professional work (18.6%), technical work (17.9%), sales and service (15.0%), and semiprofessional work (10.0%).

Study Measures

We asked respondents to identify one of their two jobs as their primary job and the other as their secondary job on the basis of the number of hours they

worked per week in each job. Respondents completed scales of items measuring transformational leadership, safety compliance, safety participation, and some potentially confounding variables (e.g., safety concern, hours worked, length of relationship with supervisor) for each of the jobs; scales measuring negative affectivity and conscientiousness were completed once, along with demographic variables (e.g., age, gender).

Generalized transformational leadership was measured with four items from the Multifactor Leadership Questionnaire (Bass & Avolio, 1995) using a 5-point Likert-type scale ranging from 1 (*not at all*) to 5 (*frequently or always*). Each transformational leadership behavior (i.e., idealized influence, inspirational motivation, individualized consideration, intellectual stimulation) was measured with one item (e.g., "Emphasizes the importance of having a collective sense of mission").

Safety compliance was measured with three items used by Neal and Griffin (2006). An example item is "I use the correct safety procedures for carrying out my job." Items were rated using a 5-point Likert-style scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*), with higher scores indicating greater safety compliance.

Safety participation was assessed with three items used by Neal and Griffin (2006); for example, "I voluntarily carry out tasks or activities that help to improve workplace safety." Items were rated on a 5-point Likert-type response scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*), with higher scores indicating greater safety participation.

Recognizing that participants in the present study hold jobs in a wide variety of occupations, there will be variability in the extent to which workplace safety is perceived to be a *safety concern* in that context. We controlled for this using a single item for each job, which asked participants to rate, for that job (on a 4-point response scale: 1 = *low concern* to 4 = *high concern*), the extent to which safety is a concern (hereafter *safety concern*). Given the potential overlap in interpretation of the middle categories (2 = *a bit*, 3 = *moderate*), responses to this item were subsequently grouped into three categories: *low*, *a bit/moderate*, and *high*, with *a bit/moderate* used as the reference category when this variable was dummy coded for analysis purposes. Twenty-three percent of the sample rated their primary job as having low safety concern, 47% rated their primary job as having a bit/moderate safety concern, and 30% rated their primary job as having high safety concern. In comparison, 37% of the sample rated their sec-

ondary job as having low safety concern, 41% rated their secondary job as having a bit/moderate safety concern, and 22% rated their secondary job as having high safety concern.

Negative affectivity was assessed using Fortunato and Goldblatt's (2002) 20-item Revised Strain-Free Negative Affectivity Scale (e.g., "I get resentful when someone expects me to do something I really don't want to do"). Items are rated on a 5-point Likert-type scale (1 = *strongly disagree*, 5 = *strongly agree*).

Conscientiousness was measured using seven positively worded items from the NEO-Five-Factor Inventory (Costa & McCrae, 1992), in which participants are asked to rate on a 5-point response scale (1 = *strongly disagree*, 5 = *strongly agree*) the extent to which they engage in a series of conscientious behaviors (e.g., "I have a clear set of goals and work toward them in an orderly fashion").

For each of the scales, internal consistency reliability was high; Cronbach's alpha coefficients are given in Table 1.

We also measured gender (0 = female, 1 = male), age, hours worked per week in each job, and time with supervisor in each job (the logarithms of the latter pair of variables were used because of the extreme positive skew of their distributions).

Results

Descriptive statistics and intercorrelations for study variables appear in Table 1.

Measurement Models

Given that scales were repeated over multiple measurements (i.e., in the primary and secondary jobs), and that the transformational leadership, safety compliance, and safety participation scales were derived from subsets of items from larger scales, it was important to establish that distinct constructs were being measured for these three constructs and two jobs, and that each scale was structurally invariant across jobs. We did this in two ways.

First, to assess the quality of the proposed six-factor measurement model (transformational leadership, safety compliance, and safety participation items loading on distinct factors for each job), we computed a confirmatory factor analysis to test its fit to the data. The resulting model, $\chi^2(45) = 185.00$, $p < .01$, suggested an excellent fit to the data on the range of fit indices recommended by Hu and Bentler (1998), with the comparative fit index (CFI) = .98,

Tucker–Lewis Index (TLI) = .97, root mean square error approximation (RMSEA) = .04, and standardized root mean square residual (SRMR) = .05. Alternative four-factor (safety compliance and safety participation merged to form a single safety factor for each job) and three-factor models (each of the three measure forming a single factor across the two jobs) yielded dramatically weaker fits to the data (CFI = .75, TLI = .69, RMSEA = .16, SRMR = .17; and CFI = .68, TLI = .61, RMSEA = .18, SRMR = .14, respectively). Correlations between factors in the six-factor model ranged in absolute value from .01 to .56. A restricted model examining invariance of item-factor loadings by fixing them to be equal across the two jobs for the respective factors did not obtain significantly worse fit than the initial model, $\chi^2(152) = 194.00$, $p < .01$; $\Delta\chi^2(7) = 9.00$, $p > .05$.

Second, we examined the convergent and discriminant validity of these factors via the average variance extracted (AVE) method (Fornell & Larcker, 1981). The AVE scores of transformational leadership for primary and secondary jobs were .68 and .78, respectively; for safety compliance, .75 and .70; and for safety participation, .63 and .79. This satisfied Fornell and Larcker's criterion (1981; AVE > .50) for convergent validity. The variance shared (i.e., the squared correlation) between any pair of factors ranged from .01 to .31, and was less than the lowest AVE score across the factors, satisfying Fornell and Larcker's discriminant validity criterion.

Structural Models

We used observed variable path analysis (Kelloway, 1998) to test our hypotheses via the estimation of the full model (depicted in Figure 1) and a series of nested restricted competing models (Table 2). Given the constraints of our sample size and the additional variables used as controls in these models, we were unable to directly extend the measurement model described above to a structural equation model; instead, we computed observed mean scale scores over the respective sets of items for transformational leadership, safety compliance, and safety participation (as well as for conscientiousness and negative affectivity) and used these rather than their latent equivalents. In all model comparison and path coefficient testing, the 95% confidence level of statistical significance was applied (i.e., $p < .05$), with two-tailed tests used in all analyses; the models were estimated using full information maximum likelihood, enabling the use of the full sample ($N = 159$)

Table 1
Study Variables: Descriptive Statistics, Intercorrelations, and Scale Reliability

Variable	M	SD	α	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. Safety participation (Job 1)	3.55	.99	.83																	
2. Safety participation (Job 2)	3.23	1.19	.92	.37																
3. Safety compliance (Job 1)	3.79	1.08	.90	.14	.09															
4. Safety compliance (Job 2)	3.92	1.11	.94	.18	-.02	.61														
5. Transformational leadership (Job 1)	3.01	1.09	.92	.31	.06	.10	.04													
6. Transformational leadership (Job 2)	2.87	1.23	.95	.15	.51	.14	-.07	.29												
7. Gender	.46	.50	—	-.07	.03	.00	.01	-.06	.06											
8. Age	37.36	10.25	—	.10	.12	.15	.13	-.08	-.07	-.05										
9. Hours worked per week (Job 1)	38.20	12.73	—	.13	.03	-.14	-.09	.04	-.01	.29	-.04									
10. Hours worked per week (Job 2)	17.79	12.93	—	.15	.29	.14	.00	.05	.20	.02	.04	.13								
11. Time with supervisor (log; Job 1)	1.27	.65	—	.01	.06	.08	.08	.02	.00	-.01	.11	-.03	.19							
12. Time with supervisor (log; Job 2)	1.13	.72	—	.09	.33	.04	-.08	.04	.20	.06	.13	.04	.28	.37						
13. Negative affectivity	2.98	.78	.93	-.14	-.10	-.27	-.27	-.19	-.09	-.03	-.22	-.01	-.08	.00	.09					
14. Conscientiousness	3.87	.63	.86	.37	.16	.32	.25	.27	.19	.12	.16	.04	.01	-.02	.00	-.22				
15. Level of safety issues in Job 1: Low ^a	.23	.42	—	-.24	-.27	.09	.11	.02	-.10	-.05	-.21	-.06	-.10	-.14	-.24	.00	-.08			
16. Level of safety issues in Job 1: High ^a	.30	.46	—	.24	.23	.11	.16	.02	.08	-.05	.01	.06	-.11	.06	-.03	-.04	.16	-.35		
17. Level of safety issues in Job 2: Low ^a	.37	.48	—	-.11	-.31	.04	.19	-.04	-.20	-.07	-.02	-.18	-.24	.11	-.13	-.01	-.12	.41	-.16	
18. Level of safety issues in Job 2: High ^a	.22	.42	—	.14	.30	.22	.14	.00	.12	.05	.11	.18	.12	.02	.12	.03	.21	-.18	.35	-.40

Note. log = log transformation; Job 1 = primary job; Job 2 = secondary job. 126 < n < 159.
^a Versus reference category a bit/moderate amount.

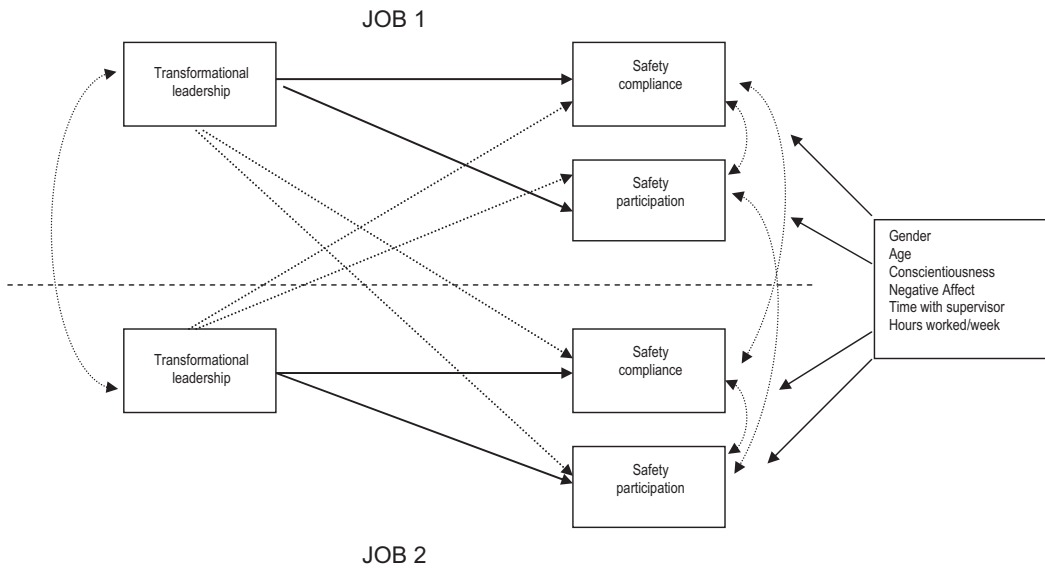


Figure 1. Hypothesized model. Solid single-headed lines indicate proposed context-specific or within-person effects. Dotted single-headed lines indicate proposed context-spillover effects. Dotted double-headed lines indicate proposed covariance.

throughout rather than losing cases to attritional random missing data.

Table 3, which shows the path coefficients from the full model, indicates that transformational leadership is a statistically significant positive predictor of safety participation. Specifically, transformational leadership in the primary job predicted safety participation in the primary job ($\beta = .19, p < .05$) and transformational leadership in the secondary job pre-

dicted safety participation in the secondary job ($\beta = .43, p < .05$). In the primary job, safety participation was also predicted by conscientiousness ($\beta = .44, p < .05$), the number of hours worked per week ($\beta = .02, p < .05$), and the level of safety concern within that job (the path coefficient for the dummy variable for low concern; $\beta = -.37, p < .05$) indicated significantly less safety participation among workers within this group than for the reference category (i.e.,

Table 2
Model Comparison: Full Model Versus Nested Models With Restricted Subsets of Paths From Transformational Leadership Behavior to Employee Safety Performance

Path from transformational leadership to employee safety performance	χ^2	df	$\Delta\chi^2$ against Model 1	Δdf against Model 1
1. Full model (all paths)—see Figure 1	33.26	18	—	—
2. Paths from transformational leadership to safety performance only	38.84	22	5.58	4
3. Paths from transformational leadership to safety compliance only	83.06	22	49.80 ^a	4
4. Paths from transformational leadership (Job 1) to safety compliance and safety performance (Job 2) only	35.59	20	2.33	2
5. Transformational leadership (Job 2) to safety compliance and safety performance (Job 1) only	35.19	20	1.93	2
6. No cross-job job paths	37.39	22	4.12	4

Note. Job 1 = primary job; Job 2 = secondary job. $N = 159$.

^a The restricted model is significantly worse than Model 1, $p < .05$.

Table 3
Path Coefficients for Final Model

Predictor variable	Outcome							
	Safety participation				Safety compliance			
	Job 1		Job 2		Job 1		Job 2	
	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>
Controls								
Gender	-.27	.15	-.10	.16	-.01	.17	.00	.17
Age	.00	.01	.01	.01	.01	.01	.01	.01
Negative affectivity	-.05	.10	-.12	.11	-.26*	.11	-.30*	.11
Conscientiousness	.44*	.12	.06	.13	.47*	.14	.40*	.14
Hours worked per week (Job 1)	.01*	.00	—	—	-.01	.01	—	—
Hours worked per week (Job 2)	—	—	.01	.01	—	—	.00	.01
Time with supervisor (log; Job 1)	-.02	.10	—	—	.01	.10	—	—
Time with supervisor (log; Job 2)	—	—	.26*	.11	—	—	-.10	.10
Level of safety issues in Job 1: Low ^a	-.37*	0.17	—	—	.36*	.18	—	—
Level of safety issues in Job 1: High ^a	0.16	0.15	—	—	.08	.16	—	—
Level of safety issues in Job 2: Low ^a	—	—	-.35*	.16	—	—	.51*	.16
Level of safety issues in Job 2: High ^a	—	—	.43*	.19	—	—	.28	.19
Transformational leadership								
Job 1	.19*	.07	-.11	.07	-.03	.08	-.02	.08
Job 2	.02	.06	.43*	.07	.09	.07	-.06	.07

Note. log = log transformation; Job 1 = primary job; Job 2 = secondary job. *N* = 159.

^a Versus reference category *a bit/moderate amount*.

* *p* < .05.

a bit/moderate concern). In the secondary job, safety participation was also predicted by level of safety concern; the coefficients for the dummy variables for low concern ($\beta = -.35, p < .05$) and high concern ($\beta = .43, p < .05$) indicated significant differences in safety participation compared with the reference category; again, the sign of the respective coefficients demonstrates the positive association between level of safety concern and safety participation.

In contrast, transformational leadership in the primary job did not predict safety compliance in the primary job ($\beta = -.03, ns$), nor did transformational leadership in the secondary job predict safety compliance in the secondary job ($\beta = -.06, ns$). In the primary and secondary jobs, safety compliance was predicted by conscientiousness ($\beta = .47, p < .05$, and $\beta = .40, p < .05$, respectively), negative affectivity ($\beta = -.26, p < .05$, and $\beta = -.30, p < .05$, respectively), and level of safety concern in the job. The effect of the latter differed from that which it had previously exhibited on safety participation, with the positive coefficients of both the low concern and high concern dummy variables versus the reference category indicating that it was curvilinear in form; low and high safety concern prompted higher levels of safety compliance than when they were moderate.

With regards to context-spillover effects, transformational leadership in the primary job did not predict safety compliance ($\beta = -.02, ns$) or safety participation ($\beta = -.11, ns$) in the secondary job. Similarly, transformational leadership in the secondary job did not predict safety compliance ($\beta = .09, ns$) or safety participation ($\beta = .02, ns$) in the primary job.

The model comparison stage of the analysis began by removing the paths between transformational leadership and safety compliance in both jobs (i.e., restricting the effect of transformational leadership to safety participation only; Model 2). We then tested the alternative restriction of removing the paths between transformational leadership and safety participation in both jobs (i.e., restricting the effect of transformational leadership to safety compliance only; Model 3). Next, we removed only the paths from transformational leadership in the secondary job to safety compliance and safety participation in the primary job (i.e., restricting the context-spillover effect of transformational leadership in the primary job to employee safety performance in the secondary job; Model 4). We then removed just the paths between transformational leadership in the primary job and both safety compliance and safety participation in the secondary job (i.e., restricting the context-spillover

effect of transformational leadership in the secondary job to employee safety performance in the primary job; Model 5). Finally, we removed all cross-job effects (i.e., so that transformational leadership in each job predicted only safety compliance and safety participation in the same job; Model 6). The one model that offered a significantly weaker fit than the full model was Model 3, in which the paths from transformational leadership to safety participation were removed, confirming the evidence from the full model path coefficients that the within-job transformational leadership–safety participation relationships are an essential component to the best-fitting model.

The sequence of models did not indicate that retaining either pair of cross-job effects (Models 4 and 5) resulted in a significantly better fit to the data than the entirely context-specific model (Model 6); thus, the latter was the most parsimonious model, in which transformational leadership in a given job is related to employee safety performance in that job only.

Discussion

The goal of the present study was twofold. First, we investigated the predictive relationships between transformational leadership and employee safety performance (i.e., safety compliance and safety participation). Second, we compared a context-specific and a context-spillover model of the relationships between transformational leadership and employee safety performance. To this end, we used a sample of moonlighters, each of whom works two jobs, creating a robust design that sidesteps the effects of between-persons differences when testing between jobs.

Hypothesis 1b was fully supported: Within-job transformational leadership was associated with within-job safety participation in the primary and secondary jobs. This is consistent with the notion that transformational leadership serves to motivate superior employee contextual performance (Conger & Kanungo, 1988). This finding also suggests that transformational leadership does not need to have a safety-specific focus to motivate safety participation in employees. Generalized transformational leadership is an ongoing leadership style and can be used by supervisors to achieve a number of interpersonal and organizational goals, including encouraging employees to take extra measures to make the work environment safe.

Some control factors were also found to be related to safety participation, highlighting additional underpinnings of safety participation. Most notably, in both jobs, when safety was of greater concern, em-

ployees engaged in higher levels of safety participation, probably as a result of the salience of risk on the job. In addition, in the context of the primary job but not the secondary job, conscientiousness and the number of hours employees spent on the job showed a positive relationship with safety participation. This suggests that some people may be more likely than others to engage in safety-related efforts that go beyond the call of duty, and that employees are more likely to engage in safety participation when the opportunity to do so is greater. As neither of these factors influenced safety participation in the secondary job where, by definition, employees work fewer hours per week, this may suggest that the decision to engage in safety participation may require particular motivational influences, such as transformational leadership.

In contrast, Hypothesis 1a was not supported: Transformational leadership was not related to safety compliance in either the primary or secondary job. We expected that, given that transformational leaders exhibit supportiveness and general concern for employees' well-being, experiencing transformational leadership would render employees more attentive to their own well-being, with one way of doing so being complying with safety procedures. However, the experience of transformational leadership did not affect whether employees followed work safety rules. One possible explanation for this finding may have to do with the nature of transformational leadership. In particular, higher levels of transformational leadership may indirectly give employees greater latitude to use their discretion in deciding whether to comply with existing organizational policies such as safety procedures, resulting in variability in individual safety compliance. This may suggest that the exertion of formal control through rewards and punishments to gain employee compliance, activities more closely associated with transactional leadership (Kelloway et al., 2006), may be more appropriate. Future research should examine whether the full range of leadership, including transactional leadership, exerts a different effect on safety outcomes.

Our findings also suggest that certain control factors consistently affected safety compliance in the primary and secondary jobs. Conscientiousness (positively) and negative affectivity (negatively) affected safety compliance in both jobs, suggesting that some people are more likely to comply with safety procedures than are others. This might also suggest that when safety compliance is important in a particular work setting, employee selection may be a valuable consideration (Tetrick, Perrewé, & Griffin, in press).

In addition, across both jobs, employees were more likely to comply with safety procedures when safety was of low concern or high concern than when it was of moderate concern. Although seemingly counterintuitive, the higher levels of compliance for low as opposed to moderate concern may be explained in several ways. When safety concern is low, it may be easier for employees to comply with safety rules, or safety-compliant employees may perceive that they have greater perceived control over the risks of the work environment (Rebitzer, 1995).

Our second goal was to compare context-specific and context-spillover models of the relationships between transformational leadership and employee safety performance, and in so doing, we implicitly addressed how transformational leadership exerts effects on employee safety performance, whether it is by motivation, socialization, or both. The context-specific model was supported, with potentially interesting implications. From a practical perspective, because the benefits of transformational leadership did not spillover beyond the job in which that leadership was experienced, this suggests that it is important to provide transformational leadership in all jobs where safety performance, and in particular, safety participation is desired, even when an employee has experienced a previous or concurrent work environment in which transformational leadership has been experienced. Conceptually, this suggests that there are motivational underpinnings of transformational leadership that arise in relation to a specific leader, perhaps as a form of reciprocity for a particular leader's extra efforts on behalf of the employee, as a result of liking or a sense of oneness with the leader (Brown & Keeping, 2005) or perceiving that the leader has a compelling vision (Conger & Kanungo, 1998). This motivational explanation seems particularly likely given the finding that safety participation (i.e., contextual performance) but not safety compliance (i.e., task performance) is influenced by transformational leadership. The notion that employee motivation is critical to safety participation has been suggested in a recent meta-analysis (Christian et al., 2009), indicating that motivation was a proximal mediator of the impact of workplace experiences on employee safety.

As with all research, the present study has some limitations. First, all data were obtained from the participants, raising possible questions about single-source bias. Nevertheless, the fit of measurement models that collapsed focal constructs within-person that would be suggestive of single-source bias was poor, with the measurement model that recognized both within-person and between-jobs measurement

yielding a comparatively superior fit. In addition to the research design, conscientiousness and negative affectivity were controlled in the measurement and structural models, which further assuages concern about systematic response biases inflating focal relationships (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Second, all analyses in the present study were based on cross-sectional data, and, as such, causal inferences about the role of transformational leadership causing employee safety performance are premature. A third issue that may limit the generalizability of the model is that this study was conducted with moonlighters. However, we argue that there is little conceptual or empirical reason to expect that differences between moonlighters and nonmoonlighters threaten conclusions from the results obtained. In a study that directly compared moonlighters with other workers, moonlighters shared substantial similarities with full-time employees (Sinclair, Martin, & Michel, 1999). Although moonlighters constituted the participants in the present study, we believe that the context-specific effects are applicable to individuals in a wide range of work contexts.

Overall, the present study holds potentially important implications for the role of transformational leadership in enhancing employee safety performance. Transformational leadership is most strongly related to safety participation, suggesting a motivational influence. Individual differences are most strongly related to safety compliance, suggesting that disposition and experience with the job are important. The finding that the impact of transformational leadership is job-specific highlights the importance of the contextual nature of transformational leadership on employee safety performance. These results are strengthened by the design of the present study, which controlled for within-person differences.

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