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Relations of Interpersonal Unfairness with Counterproductive Work Behavior: The Moderating Role of Employee Self-Identity

Liu-Qin Yang · Russell E. Johnson · Xichao Zhang · Paul E. Spector · Shiyong Xu

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Abstract
Purpose Following the job demands–resources model, this study investigated the role of self-identity, or how employees define themselves in relation to others, in the relations between interpersonal unfairness and counterproductive work behavior (CWB). Self-identity, an important self-regulatory and resource-related variable, was proposed to moderate the unfairness–CWB relations.
Methodology A sample of 361 Chinese airline industry employees completed measures of identity, interpersonal unfairness, and CWB directed at people or the organization. We conducted a series of moderated regression analyses to test the hypotheses.
Findings We found as expected relational identity (identity based on dyadic connection to another person) and collective identity (identity based on membership in a social group) buffered unfairness–CWB relations, such that positive relations were weaker when relational or collective identity was high (vs. low). Support was not found for the proposed moderation effect of individual identity (identity based on uniqueness from others) on unfairness–CWB relations. Supplementary relative weight analyses indicated that multiple identity levels and interactions between them accounted for considerable proportions of explained variance in CWB.
Implications These findings suggest that different levels of employee identity seem to play different roles in the interpersonal unfairness–CWB relations, and it is important to continue studying employee identity profiles in the context of predicting CWB occurrences.
Originality/Value This study not only advances our understanding of potential antecedents of CWB, but also underscores the importance of simultaneously studying all three levels of employee identity.

Keywords Unfairness · Self · Identity · Counterproductive work behavior · Moderation

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Counterproductive work behavior (CWB) refers to volitional acts that harm organizations and their members (Spector and Fox 2005). CWB includes acts that target the organization (CWBO; e.g., taking property without permission) and those that target specific individuals (CWBI; e.g., cursing). Regardless of the target, CWB has detrimental effects on employee well-being and company performance (Frost 2007; Ivancevich et al. 2003). For example, CWBs such as employee theft and fraud are common occurrences in organizations (Case 2000), costing U.S. organizations an estimated $50 billion annually and being responsible for upwards of 20 % of failed businesses (Coffin 2003). It is therefore imperative to understand the antecedents of such behaviors with an eye towards preventing their occurrence.

Previous research suggested that CWB can result from stressful events and the negative emotions that accompany them (Aquino et al. 1999; Fox and Spector 1999; Glomb 2002; Judge et al. 2006; Lau et al. 2003). Meta-analytic evidence suggests that interpersonal unfairness in particular is among the strongest predictors of counterproductive behavior at work (Colquitt et al. 2001; Hershcovis et al. 2007). Interpersonal unfairness refers to a lack of propriety, dignity, and respect from authority figures who are charged with implementing company procedures, making decisions, and distributing outcomes (Bies and Moag 1986; Colquitt 2001). Even when interpersonal unfairness is attributed to one's supervisor, it is capable of eliciting CWB that targets the company (i.e., CWBO) because supervisors are the face of the organization to many employees and supervisor actions typify organizational treatment (Eisenberger et al. 2002; Gerstner and Day 1997).

The aim of this study was to further examine relations of interpersonal unfairness with CWB. Although it is well-established that a negative relation exists between these two variables (e.g., Hershcovis et al. 2007), meta-analytic results suggest there is considerable between-study variance in the size of this relation (Berry et al. 2007; Colquitt et al. 2001). Such variance hints at the possibility of moderator effects (Hunter and Schmidt 1990), suggesting a need to move beyond simple bivariate effects.

In this study we consider the possible moderating effect of employee identity on unfairness–CWB relations. Identity refers to the way that people define themselves relative to others (e.g., seeing oneself as unique from others vs. a partner in dyadic relationships vs. a member in larger social groups; Brewer and Gardner 1996). It has been found that employee identity is especially relevant when considering unfairness (e.g., Brockner et al. 2005; Johnson and Lord 2010; Johnson et al. 2006; Tyler and Blader 2003). As we describe later, certain identity levels are believed to function as a personal resource by providing employees with the social support needed to overcome the demands placed on them by job stressors. We believe that certain identity levels may therefore reduce the likelihood that job stressors like interpersonal unfairness will lead employees to engage in CWB.

Examining identity as a potential moderator of interpersonal unfairness–CWB relations is important for two reasons. First, prior research has examined the moderating role of individual difference variables on antecedent–CWB relations, this research is somewhat limited because its coverage has been restricted. For example, broad individual difference variables like the Big Five personality traits and positive and negative affectivity have received the bulk of attention (e.g., Bowling and Eschleman 2010; Penney and Spector 2005; Yang and Diefendorff 2009). While this research has proven useful, the moderating role of person-based variables on antecedent–CWB relations may be underestimated when other variables—ones beside the Big Five traits and general affectivity—are overlooked. We therefore extend research on person-based moderators by examining identity, a self-regulatory variable which has been found to relate to CWB (Jackson et al. 2006; Johnson and Lord 2010; Johnson and Saboe 2011).

Second, our study also contributes to previous research that has examined the interplay of unfairness and identity. Some of this research has examined state or situationally induced identity levels by showing how, for example, fair and unfair treatment activate different identities that mediate effects on subsequent behavior (e.g., Blader and Tyler 2009; Johnson et al. 2010; Johnson and Lord 2010). Our focus in this study, in contrast, is on chronic or trait identity levels, which shape how people perceive and respond to unfair acts. Although there is existing research concerning chronic identity as a moderator of unfairness-related effects (e.g., Brockner et al. 2005; Holmvall and Bobocel 2008; Johnson et al. 2006), none of these studies have examined unfairness–CWB relations and several studies only analyzed one or two identity levels rather than all three. It is important to distinguish between all three levels because they are relatively orthogonal and have unique effects (Johnson and Saboe 2011). We therefore assessed all three levels when testing identity as a moderator of unfairness–CWB relations. In the sections that follow we explain why identity is expected to moderate relations of interpersonal unfairness with CWB.

A Job Demands–Resources Model of Counterproductive Work Behavior

The job demands–resources model (JD–R; Bakker and Demerouti 2007; Demerouti et al. 2001) suggests that job performance is a product of the job demands and resources that employees face at work. Job demands are aspects of the job that tax employees' affective, cognitive, and physical resources, which impair their ability to effectively regulate their behavior. Although job demands are not inherently negative, they function as stressors when the physical and psychological costs of meeting demands prevent employees from completing essential job tasks. Resources, on the other hand, are tangible and intangible factors that help buffer employees from the depleting effects of job demands, which include characteristics of the environment (e.g., coworker or supervisor support, properly functioning equipment) as well as the person (e.g., expertise, self-efficacy; Bakker et al. 2005; Xanthopoulou et al. 2007). In addition, job resources may also activate motivational processes (e.g., work engagement) that elicit positive outcomes such as high job performance (e.g.,

Boyd et al. 2011; Christian et al. 2011; Demerouti et al. 2001). Taken together, job demands impair performance whereas resources motivate performance (Bakker and Demerouti 2007).

Interpersonal Unfairness as a Job Demand

In the current study, interpersonal unfairness represents a job demand that taxes employees' affective, cognitive, and physical resources. When employees are treated in a disrespectful manner by authority figures, it communicates that there are problems in their relationship with the authority figure, a work relationship of high significance (Eisenberger et al. 2002; Gerstner and Day 1997). The relationship problems signaled by interpersonal unfairness elicits potent emotional responses in employees, requiring them to cope with and regulate these strong emotions that drain their available resources and pull attention away from work tasks (Bies and Moag 1986; Weiss and Cropanzano 1996). Interpersonal unfairness also instigates attributional processing as employees attempt to ascertain the cause of their mistreatment and who is to blame for it (Folger and Cropanzano 1998), thereby placing further demands on available resources. In support of these ideas, previous research has verified that unfairness and conflict function as job demands that tax employees' resources (e.g., Crawford et al. 2010; Maslach and Leiter 2008).

As a job demand, exposure to interpersonal unfairness depletes employees' resources as they attempt to cope with the affective and cognitive ramifications of the unfair exchange. Depending on the salience of the demand and how successful they are at responding to it, employees may eventually feel burned out due to their depleted pool of resources. One of the consequences of being exposed to job demands and the resource depletion that accompanies it is a greater likelihood of counterproductive behavior. Effective self-regulation at work requires that employees have sufficient resources at their disposal to maintain their on-task attention (Beal et al. 2005). When these resources are depleted, however, people lose the ability to override impulses and to align their behavior with prevailing norms (Baumeister and Vohs 2007). Indeed, it has been found that resource depletion makes it more difficult for employees to refrain from deviant and unethical acts (e.g., Christian and Ellis 2011; Gino et al. 2011; Thau and Mitchell 2010). For example, using the JD–R model to derive predictions, Balducci et al. (2011) supported their hypothesis that interpersonal demands are positively related to acts of hostility and abuse. Thus, consistent with the JD–R model and existing reviews (Colquitt et al. 2001; Hershcovis et al. 2007), we expect a positive relationship between interpersonal unfairness and CWB.

Identity as a Personal Resource

According to the JD–R model, whether or not job demands like interpersonal unfairness translate into CWB depend on employees' job and person-based resources. In this study we examined identity as a person-based resource that may help offset the demands created by interpersonal unfairness, thus reducing the likelihood that CWB is elicited. Identity refers to how people define themselves in relation to others, and these self-definitions are comprised of at least three levels (e.g., Brewer and Gardner 1996; Kashima and Hardie 2000; Lord and Brown 2004). At the *collective* identity level, the self is defined by the social groups (e.g., work teams and organizations) that a person belongs to. At this level, people internalize collective goals and norms, work towards the welfare of the groups they identify with, and base their self-worth on group success and their success at fulfilling group roles (Jackson et al. 2006). At the *relational* identity level, the self is defined via dyadic relationships that people have with their partners. At this level, people are motivated by the welfare and role expectations of their partners, and their self-worth is a function of the quality of dyadic relationships (Andersen and Chen 2002). At the *individual* identity level, the self is seen as separate from others, and one's sense of uniqueness and self-worth are derived from being different—and better—than others. At this level, behavior is driven primarily by personal attitudes and welfare.

According to occupational health and stress research, social support is one of the most important buffers of the negative effects of stressors on well-being (Johnson and Hall 1988). We propose that identity may function as a personal resource because certain identity levels help build social capital with others that can be withdrawn in the form of social support when needed (e.g., during times when employees are faced with high job demands). Both collective and relational identities involve adopting inclusive self-definitions where groups (in the case of the collective level) and partners (in the case of the relational level) are incorporated into one's self-concept. When collective identity is high, employees internalize the norms and goals of their work team, show greater commitment and loyalty to the team, and act in ways that benefit team members (Jackson et al. 2006; Johnson et al. 2010). These team-oriented acts strengthen the social ties that employees have with other members, which are reciprocated via support and helping from others. For example, it has been found that collective identity has a negative relation with strain and a positive relation with job satisfaction, and that social support mediates these relations (Haslam et al. 2005; Haslam and Reicher 2006). Owing to the larger social support networks of employees with higher collective identities, as well as their

motivation to benefit rather than harm others, we propose that collective identity is a personal resource that lessens the relations of job demands with CWB.

Hypothesis 1 Collective identity moderates the relations of interpersonal unfairness with (a) CWBI and (b) CWBO, such that these relations are weaker when collective identity is higher (vs. lower).

Similar to collective identity, relational identity entails an interweaving of one's sense of self with an external party, in this case a dyadic partner. Employees with higher relational identities define themselves through their dyadic ties to others and they act in ways that benefit their partners because self-worth is derived from the welfare and reflected appraisals of partners (Sluss and Ashforth 2007). Accordingly, such employees tend to build high-quality social relationships with other people and maintain their repertoire of social resources more easily than people with low relational identities. For example, people with higher relational identities are viewed as more open and responsive to others' needs by their partners (Cross et al. 2000), which in turn elicits greater support from others. In work settings, it has been found that employees with higher (vs. lower) relational identities form higher-quality exchange relationships which are based on trust and loyalty (Chang and Johnson 2010; Cross et al. 2000; Jackson and Johnson 2012). Thus, we suspect the employees with higher relational identities are less likely to respond to job demands via counterproductive behaviors because of the greater social support available to them and their motivation to help rather than harm other people.

Hypothesis 2 Relational identity moderates the relations of interpersonal unfairness with (a) CWBI and (b) CWBO, such that these relations are weaker when relational identity is higher (vs. lower).

Thus far, we have argued that identity is a resource that helps buffer employees from the depleting effects of job demands, which is true in the case of collective and relational identities. However, a different pattern of relations is expected in the case of individual identity. Employees with higher individual identities view themselves as separate from others, and therefore act in accordance with personal values and motives that maximize self-interests (e.g., Brebels et al. 2008; Skitka and Bravo 2005; Stapel and Van der Zee 2006). Such employees, then, are not predisposed to accruing social capital with group members and partners, nor do they receive the social support that accompanies it. In fact, individual identity may be negatively related to high-quality relationships at work, possibly because some of their self-serving actions may harm others (Jackson and Johnson 2012; Johnson and Saboe 2011). At a minimum, people with higher individual identity tend to be less satisfied with their work relationships (e.g., individual identity was conceptualized as individualism; Hui et al. 1995), and they are less inclined to expect or seek social support (e.g., individual identity was conceptualized as low collectivism; Goodwin and Plaza 2000). Taken together, employees with higher individual identity are expected to have fewer social resources at their disposal when job demands are high, causing them to experience the full effect of interpersonal unfairness. The depleting effects of interpersonal unfairness will, in turn, impair individually oriented employees' ability to refrain from CWB. In addition, employees with higher individual identity may be motivated to perform certain CWBs that increase their personal outcomes (e.g., theft of office supplies and equipment) in order to redress possible effort–reward imbalances when job demands are experienced. For these reasons, we expected that the moderating effect of individual identity is opposite to that of collective and relational identities.

Hypothesis 3 Individual identity moderates the relations of interpersonal unfairness with (a) CWBI and (b) CWBO, such that these relations are stronger when individual identity is higher (vs. lower).

Method

Participants and Procedure

Participants were 361 flight attendants and staff out of 400 randomly sampled employees (90.3 %) from a large commercial airline company in China. Approximately 85 % were female, 82 % were flight attendants, and 83 % had an Associate in Arts degree or lower. Their mean age was 25.2 years ($SD = 6.9$) and they worked an average of 26.6 ($SD = 17.8$) hours per week. One of the coauthors, an outside research consultant for this airline company, gave a 30-min presentation on the importance of managing employee stress at a regular managerial meeting held within the company. Afterwards, the organizational management group agreed to allow their employees to participate in a research study on demands and stress. Administrative staff then distributed survey packets to a random sample of 400 employees belonging to all departments in the company. Survey packets included an anonymous questionnaire, informed consent, and a prepaid, self-addressed envelope. Participants were instructed to return completed surveys directly to the consulting coauthor, and no incentives were used to recruit participants.

Measures

Interpersonal Unfairness

Interpersonal unfairness was assessed using four items ($\alpha = .88$) from the Chinese version of Colquitt's (2001) scale (Yang et al. 2007; Zhang 2006). A sample item is "The authority figure (who enacted the procedure used to arrive at your work outcome/rewards) has treated you with dignity." Participants responded to the items using a 5-point Likert scale (from 1 = "Strongly disagree" to 5 = "Strongly agree"). To be consistent with the focal construct of this study (interpersonal *un*fairness), we reverse coded the items before calculating the scale scores.

Self-identity

Trait-based self-identity was measured with Selenta and Lord's (2005) Levels of Self-Concept Scale (LSCS), which has been shown to be a reliable measure of individual, relational, and collective identities in previous studies (e.g., Fehr and Gelfand 2010; Johnson and Lord 2010; Johnson and Saboe 2011; Johnson et al. 2012). Five items each measure individual self-identity ($\alpha = .80$; "I feel best about myself when I perform better than others"), relational self-identity ($\alpha = .87$; "Caring deeply about another person such as a close friend or relative is important to me"), and collective identity ($\alpha = .89$; "When I become involved in a group project, I do my best to ensure its success"). Items from the LSCS were translated into Chinese and back-translated to English by bilingual researchers using procedures recommended by Van De Vijver and Leung (1997). Participants responded to all self-identity items using a 5-point Likert scale (from 1 = "Strongly disagree" to 5 = "Strongly agree").

Because this was the first time a Chinese version of the LSCS was used, we assessed its factor structure. We conducted a confirmatory factor analysis (CFA) with maximum likelihood estimation using Mplus 5.21 (Muthén and Muthén 2002). The set of individual, relational, and collective self-identity items were specified to load on separate factors. Results of the CFA suggested that the 3-factor model had acceptable fit based on commonly used indices (Carmines and McIver 1981; Hu and Bentler 1999; Kline 2004): $\chi^2(87) = 230.93$ (normed Chi-square [χ^2/df] = 2.65); non-normed fit index = .96; comparative fit index = .95; root mean square error of approximation = .07; and standardized root mean square residual = .05. The average intercorrelation among the three identity factors was .44 and the average factor loading was .75. In addition, the fit of this 3-factor model was significantly better than alternative 3-factor models where the correlations between self-identity levels were systematically fixed to equal 1; that is., a 3-factor model with the correlation between relational and collective identity fixed as 1—essentially a 2-factor model, and another model with all correlations between different identity levels fixed as 1—essentially a 1-factor model. Consistent with theory (e.g., Brewer and Gardner 1996), these results indicate the three identity levels are distinguishable.

CWB

CWBI (7 items; $\alpha = .74$) and CWBO (12 items; $\alpha = .66$) were measured using a 19-item checklist developed by Bennett and Robinson (2000). This checklist was translated into Chinese via the same procedures used for the LSCS and has been used previous for research conducted in China (e.g., Levine et al. 2011; Yang et al. 2007). Participants indicated how often they engaged in certain behaviors in the workplace using a frequency scale ranging from 1 = "Never" to 7 = "Daily." Sample items include "Made fun of someone at work" (CWBI) and "Took property from work without permission" (CWBO). The lower reliability of the CWB checklists (especially CWBO) relative to the other measures reflects the low-to-medium intercorrelations among the CWB behaviors (e.g., a range of .02–.45 for the CWBO items). That is consistent with the belief that individual instances of CWBs are causal indicators of an aggregate CWB construct rather than interchangeable reflections of an underlying superordinate construct (see Bollen and Lennox 1991; Edwards and Bagozzi 2000). That is, employees who come in late without permission do not necessarily also steal from their employer (Spector et al. 2006).

Results

Listed in Table 1 are descriptive statistics, internal consistencies, and intercorrelations among the focal variables. Consistent with past findings, CWB tended to be negatively related to relational and collective identities, and positively related to interpersonal unfairness and individual identity (e.g., Ferris et al. 2012; Johnson and Saboe 2011). Although the size of the correlation between relational and collective identities was moderate ($r = .66$), the CFA results reported earlier indicated that model fit was superior when these two identity levels were specified as separate dimensions versus a single dimension. Lastly, the moderate correlation ($r = .61$) between CWBI and CWBO parallels previous empirical findings (e.g., Bennett and Robinson 2000; Penney and Spector 2005). For example, Bennett and Robinson's (2000) validation study of the measure used by the present study reported a correlation of .69 between the

Table 1 Descriptive statistics, internal consistencies, and intercorrelations among the focal variables

Variable	Mean	*SD*	1	2	3	4	5	6	7	8	9
1. Gender	.14	.35	–								
2. Age	25.16	6.86	.04	–							
3. Weekly work hours	26.62	17.84	.18**	.41**	–						
4. Interpersonal unfairness	3.75	.84	.03	.04	−.10	(.88)					
5. Individual identity	2.71	.75	.14**	.11*	.10	.01	(.80)				
6. Relational identity	4.49	.58	−.13*	.00	.10	−.13*	.04	(.87)			
7. Collective identity	4.43	.63	−.11*	.03	.03	−.29**	.00	.66**	(.89)		
8. CWBI	1.26	.49	.18**	.03	.05	.24**	.10	−.13*	−.34**	(.74)	
9. CWBO	1.18	.29	.09	.04	−.01	.23**	.12*	−.06	−.24**	.61**	(.66)

Note: $N = 361$. Coefficient alphas are reported along the diagonal in parentheses

* $p < .05$, ** $p < .01$

Table 2 Interpersonal Unfairness by Self-Identity Interactions Predicting CWB

Predictors	Hypothesis 1		Hypothesis 2		Hypothesis 3		Hypotheses 1–3	
	CWBI	CWBO	CWBI	CWBO	CWBI	CWBO	CWBI	CWBO
Step 1—Direct effects								
Individual					.11*	.13*	.11*	.13*
Relational			−.06	.00			.16*	.16*
Collective	−.25**	−.15**					−.35**	−.25**
Interpersonal Unfairness	.18**	.20**	.25**	.25**	.26**	.25**	.17**	.19**
F	29.70**	17.58**	14.36**	11.54**	14.78**	14.63**	17.41**	11.57**
R^2	.15**	.09**	.08**	.06**	.08**	.08**	.17**	.12**
Step 2—Interactions								
Unfairness × Individual					.04	.02	.06	.05
Unfairness × Relational			−.17**	−.16**			.07	−.04
Unfairness × Collective	−.24**	−.18**					−.31**	−.16*
ΔF	21.61**	12.15**	10.17**	9.29**	.44	.15	10.25**	4.92**
ΔR^2	.06**	.03**	.03**	.02**	.00	.00	.07**	.03**

Note: Standardized regression coefficients are reported in the table, the values of which correspond to those from the full model

* $p < .05$, ** $p < .01$

two subscales in a sample of 352 full-time employees from various industries.

To test Hypotheses 1–3, moderated multiple regression analyses were conducted. Each outcome (CWBI and CWBO) was regressed on interpersonal unfairness and the focal identity level in Step 1, followed by the unfairness by identity interaction term in Step 2. All main effect terms were centered and the centered values were used to calculate interaction terms (Cohen et al. 2003). When significant, interactions were plotted using values that were one standard deviation above and below the scale means. Despite the distribution of the outcome variables (CWBs) being somewhat skewed, which is not atypical (e.g., Spector et al. 2006), we believe our analytical strategy was appropriate given our emphasis on the incremental R^2 change explained by the focal interaction term instead of the significance tests of the focal regression coefficient (Cohen et al. 2003). Results of these multiple regression analyses are presented in Table 2 and described below.

First, the interpersonal unfairness by collective identity interaction predicted CWBI ($\beta = -.24$, $p < .01$), as well as CWBO ($\beta = -.18$, $p < .01$). In line with Hypothesis 1, the positive relation of interpersonal unfairness with CWB was smaller when employees reported higher (vs. lower) collective identities (see Fig. 1). Simple slope analyses indicated that the positive interpersonal unfairness–CWB relations were significant when collective identity was one *SD* below the mean ($\beta = .47$, $p < .01$, $R^2 = .22$ for CWBI; $\beta = .45$, $p < .01$, $R^2 = .20$ for CWBO) but not when it was one *SD* above the mean ($\beta = -.08$, ns, $R^2 = .01$ for CWBI; $\beta = .14$, ns, $R^2 = .02$ for CWBO). The interpersonal unfairness by relational identity interaction also

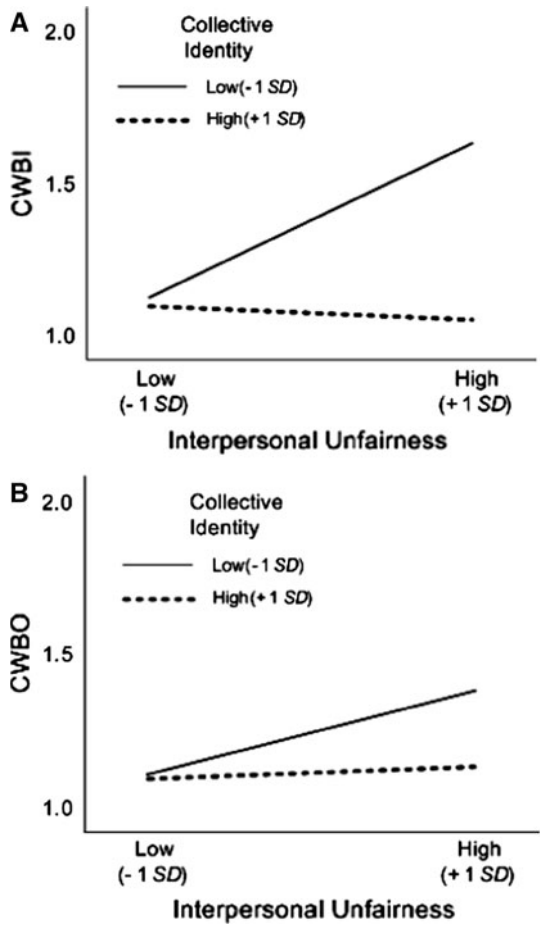

Fig. 1 Interpersonal unfairness by collective identity interaction predicting CWBs

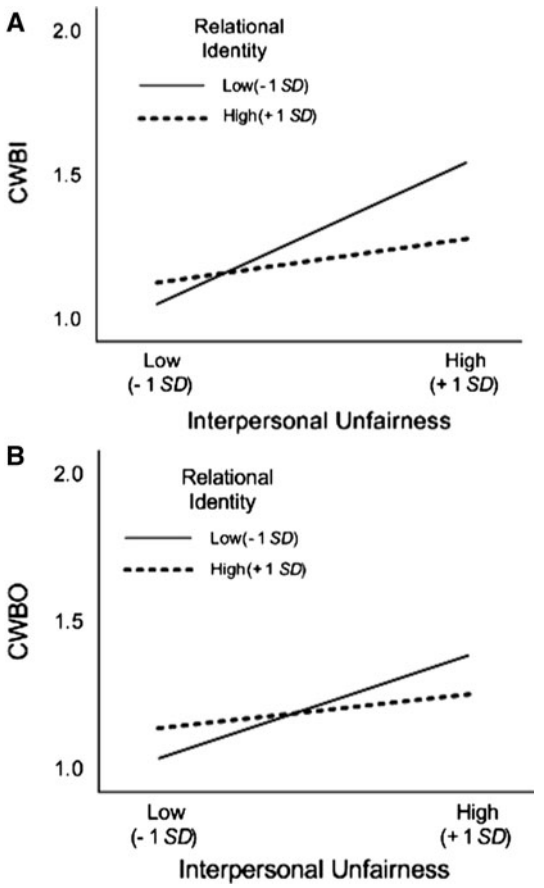

Fig. 2 Interpersonal unfairness by relational identity interaction predicting CWBs

predicted CWBI ($\beta = -.17$, $p < .01$), as well as CWBO ($\beta = -.16$, $p < .01$). Consistent with Hypothesis 2, the positive relations of interpersonal unfairness with CWBs were smaller when employees reported higher versus lower relational identities (see Fig. 2). Although the magnitude of relations differed across high and low levels of relational identity, simple slope analyses indicated that the positive interpersonal unfairness–CWB relations were significant in all cases: when relational identity was one standard deviation (*SD*) below the mean ($\beta = .43$, $p < .01$, $R^2 = .19$ for CWBI; $\beta = .45$, $p < .01$, $R^2 = .20$ for CWBO) and when it was one *SD* above the mean ($\beta = .25$, $p < .01$, $R^2 = .06$ for CWBI; $\beta = .22$, $p < .01$, $R^2 = .05$ for CWBO). Lastly, the interpersonal unfairness by individual identity interaction was nonsignificant in predicting CWBI ($\beta = .04$, ns) or CWBO ($\beta = .02$, ns). Thus, our prediction (Hypothesis 3) that interpersonal unfairness–CWB relations would be larger when individual identity was high versus low was not supported.

We also re-ran our focal regression analyses with participant age, gender, and hours worked per week included as control variables. We did so because there is some evidence that perceptions of unfairness and self-identity levels may covary with these demographics (e.g., Gabriel and Gardner 1999; Lee and Farh 1999). Results of these analyses revealed that the significance and nature of the interactions reported in Table 2 remained the same when the demographics were controlled for (a detailed report of these results are available from the first author upon request).

Additionally, we also tested all of our hypotheses simultaneously by regressing CWB on all of the main effect and interaction terms in a single model. As shown in the last two columns of Table 2, the interaction term of interpersonal unfairness and collective identity remained significant in predicting CWBI and CWBO ($\beta = -.31$ and $-.16$, respectively; $p < .01$ for both), while the interpersonal unfairness by relational identity interaction became nonsignificant ($\beta = .07$ and $-.04$ for CWBI and CWBO; ns). Taken together, Hypotheses 1 and 2 received full support when the identity levels were tested in separate models, and Hypothesis 1 received full support regardless of whether the identity levels were tested in a single model or separate models. Hypothesis 3 was not supported in any analysis.

Supplementary Analyses

In addition to understanding the nature of the moderating effect of employee identity on unfairness–CWB relations, it is also worthwhile to estimate the relative importance of the identity levels for predicting CWB. To do so, we ran relative weight analyses (see Tonidandel et al. 2009) where each CWB outcome was simultaneously regressed on all three identity levels and all possible two-way and three-way interactions among them (seven predictors in total). Specifically, we used a bootstrapping procedure in SAS 9.2 (5000 iterations) to generate estimates of relative weights and their corresponding 95 % confidence intervals. The relative weights represent the average percentage of the variance of CWBI (or CWBO) as explained by each of the seven predictors, across the 5,000 iterations. These results are presented in Table 3, along with results from respective multiple regression models.

For both CWBI and CWBO the main effect of collective identity was the most dominant across all seven predictors in that it explained the most variance in CWBI and CWBO (4.8 and 3.8 %, respectively). In addition, relative weight results suggest that the individual by collective identity interaction, the relational by collective identity interaction, and the three-way identity interaction accounted for significant variability in CWBI, and that the relational by collective identity interaction contributed significantly to the prediction of CWBO.

To examine the pattern of the interaction of relational and collective identities in predicting CWBO, we ran simple slope analysis. The results suggest that collective identity's relation with CWBO was stronger (vs. weaker) when employees reported lower (vs. higher) relational identity ($\beta = -.33$, $R^2 = .11$ when relational identity was one *SD* below the mean; $\beta = -.31$, $R^2 = .09$ when relational identity was one *SD* above the mean). Preliminary simple slope analysis of the three-way interaction in predicting CWBI suggests that the interaction of relational and collective identities accounted for 1.4 % of the variability in CWBI when individual identity was one *SD* below the mean, but it only accounted for 0.5 % of the variability in CWBI when individual identity was one *SD* above the mean. Interestingly, our follow-up analysis suggests that the interaction pattern between relational and collective identity in predicting CWBI among low-individual-identity employees was similar to the pattern in predicting CWBO regardless of individual identity levels. That is, the collective identity–CWBI relation was stronger when relational identity is lower ($\beta = -.48$, $R^2 = .23$ when relational identity is lower than average; $\beta = -.36$, $R^2 = .13$ when relational identity is higher than average). Figure 3 illustrates the significant interaction of relational and collective identities in predicting CWBO and CWBI (among a subsample of employees with low individual identity).

Table 3 Regression coefficients and relative weights of identity levels in predicting employee CWBs

Predictor	Multiple regression coefficient	Relative weight	95 % Confidence interval for relative weight	
			Lower limit	Upper limit
Outcome: CWBI				
1. Individual identity (I)	.14*	.017	−.002	.061
2. Relational identity (R)	.20**	.008	−.013	.021
3. Collective identity (C)	−.45**	.048*	.018	.097
4. I * R	.16	.019	−.001	.056
5. I * C	−.26**	.020*	.002	.057
6. R * C	.01	.025*	.006	.049
7. I * R * C	−.09	.019*	.002	.048
Outcome: CWBO				
1. Individual identity (I)	.14*	.005	−.009	.019
2. Relational identity (R)	.16*	.006	−.015	.015
3. Collective identity (C)	−.33**	.038*	.012	.094
4. I * R	−.02	.005	−.010	.019
5. I * C	.01	.006	−.010	.014
6. R * C	−.01	.020*	.004	.044
7. I * R * C	−.08	.006	−.012	.014

Note: $N = 361$; Number of bootstrapping = 10,000; Relative weight values are bias corrected accelerated estimates

* $p < .05$

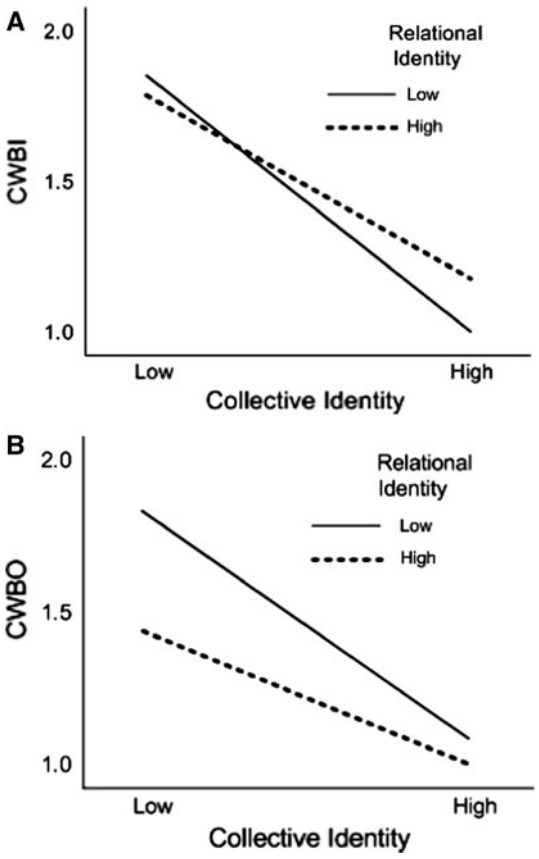

Fig. 3 Collective identity by relational identity interaction predicting CWBs

Discussion

Based on non-experimental field data, findings from the present study supported our predictions that relations of interpersonal unfairness with CWB depend on employee identity. Specifically, we found that both relational and collective identities had significant moderating effects, such that the positive relations of interpersonal unfairness with CWB were weaker when employees reported higher (versus lower) identity levels. We did not, however, support the hypothesized individual identity by interpersonal unfairness interaction for predicting CWB. Additionally, the results from testing all three interactions simultaneously only produced a significant collective identity by interpersonal unfairness interaction for predicting CWBI and CWBO. However, the aforementioned results should be interpreted cautiously due to a potential multicollinearity issue in the full regression models as attributed to the moderate-to-high correlation between relational and collective identity. One piece of evidence for the multi-collinearity issue is that the sign for relational identity in predicting CWBI differs when it is included in the regression model separately (negative) versus together with collective identity (positive). This positive relation is inconsistent with past empirical (e.g., Johnson and Saboe 2011) and theoretical (e.g., Sluss and Ashforth 2007) research on relational identity and CWB. As such, below we limit our discussion to the findings based on the separate hypothesis testing.

The present study offers several contributions to the literature on CWB and the JD–R model. First, it examined employee identity as an important self-regulatory variable that helps account for variability in interpersonal unfairness–CWB relations noted in previous meta-analytical studies (Berry et al. 2007; Colquitt et al. 2001). Knowledge of employees' relational and collective identity levels therefore helps clarify who will (and will not) respond to interpersonal unfairness with CWB. Second, we investigated the role of all three identity levels in unfairness–CWB relations, which proved important because results differed across them (e.g., individual identity did not moderate unfairness–CWB relations, and the moderating effect of collective identity was more robust than relational identity). Doing so extends previous literature that either examined positive behaviors (e.g., task or citizenship behaviors) in response to unfair situations or only examined one or two identity levels (e.g., Brockner et al. 2005; Holmvall and Bobocel 2008; Johnson et al. 2006). Finally, findings from this study enrich the JD–R model by extending our knowledge about the potential influence of self-regulatory resources on employees' coping with job demands like interpersonal unfairness. Indeed, given the important influences of employee identity on employee behaviors and work relationships (Brickson 2000; Johnson et al. 2012; Johnson and Saboe 2011; Sluss and Ashforth 2007), the present study opens the door for future research that examines the impact of employee identity within a JD–R framework.

Self-identity and the JD–R Model of CWB

Consistent with the prediction of the JD–R model and empirical evidence from prior research (e.g., Balducci et al. 2011; Hershcovis et al. 2007), interpersonal unfairness was significantly related to more frequent CWBI and CWBO. The resource depleting effects of interpersonal unfairness can, however, be buffered by personal resources, thereby decreasing the likelihood that employees will respond by performing CWB. High levels of collective and/or relational identity served such a function because collective or relational-oriented employees have more social resources available to handle the demands from coping with interpersonal unfairness, thus mitigating CWB that results from resource depletion. This logic is consistent with prior research supporting that higher relational or collective

identity contributes to higher-quality social relationships and more social support from others (e.g., Chang and Johnson 2010; Cross et al. 2000; Haslam and Reicher 2006; Jackson and Johnson 2012; Johnson et al. 2012). It might be fruitful for future research to assess employees' social resource repertoires (e.g., support from coworkers or teams) after employees experience unfair treatment from authority figures.

According to self-identity theory (e.g., Markus and Wurf 1987), employees' identity levels are dynamic cognitive structures that shift in response to salient environmental cues. From a practical perspective, therefore, it may be possible for organizational management to create work settings that elicit desired identity levels that are compatible with the culture of the organization and the nature of work tasks. This might be accomplished through the use of team-building interventions that produce better interpersonal relationships and more of an "esprit de corps" in the workplace. Similarly, training programs that enhance charismatic and transformational leadership in managers will activate the relational and collective identities of the employees who report to those managers (e.g., Lord and Brown 2004; van Knippenberg et al. 2004). According to the results of this study, if employees' collective or relational identities are salient, then the occurrence of CWB in response to interpersonal unfairness may be attenuated. For example, Johnson et al. (2012) found that leaders were less likely to engage in abusive behaviors toward subordinates when they had strong collective or relational identities (vs. strong individual identity).

Contrary to our expectation, the strength of the relation between interpersonal unfairness and CWB did not vary as a function of employees' individual identity levels. One possible explanation is that information pertaining to interpersonal unfairness is less relevant to individual-oriented employees. As mentioned earlier, one reason employees care about such information is that it communicates the quality of their relationship with the authority figure. Although social relationships are important to employees with high relational and collective identities, they have less impact on those with high individual identities (Johnson et al. 2006). This idea is consistent with the notion that people with high individual identities are not guided by other people's opinions or attitudes (e.g., Brebels et al. 2008). Another possible reason for the nonsignificant interaction between individual identity and interpersonal unfairness lies in the cultural context where the present study took place. That is, self-identity may operate differently in Chinese culture from it does in Western cultures (Li 2002; Zhu et al. 2007). Indeed, evidence from prior literature suggests Chinese people are very attentive to their social environment such that social environmental components are taken into account before they express personal needs and interests (Hsu 1971; Li and Luo 2011). Therefore, Chinese people make efforts to maintain a certain level of relational exchange with others even if they have high needs to follow self-interests (i.e., high individual identity). In the context of our study, compared to those with lower individual identities employees with higher individual identities might have similar amount of social resources available to help cope with the demands of interpersonal unfairness possibly because they make efforts to remain connected with colleagues. Therefore, the unfairness–CWB relations were similar for these two groups of employees. Future research is warranted to test the aforementioned speculations and further examine the interplay of interpersonal unfairness and individual identity simultaneously in multiple cultural contexts.

Identity Profiles and CWBs

Results from relative weight analyses suggest that the collective level was the most important predictor of CWBI and CWBO among the identity levels, which highlights the importance of considering specific employee traits like self-identity and extends the existent literature on individual difference-CWB relations (e.g., Spector 2011). In addition, relational and collective identities jointly predicted CWBO, while all three levels of identity jointly predicted CWBI. This suggests that multiple identity levels may operate in tandem to predict CWB. For example, the beneficial effects of collective identity on CWBO may be strengthened when employees also have a low individual identity level. Such a result may be because a combination of high collective and low individual identity levels could produce motivation that is highly concerned with the welfare of one's social groups and, at the same time, motivation that is driven less by self-interest (see Johnson and Saboe 2011; Johnson et al. 2012). This is just one example as there may be interactions involving relational identity as well.

Interestingly, the significant three-way interaction of all three identity levels in predicting CWBI suggests that employee individual identity constrains how the interaction of relational and collective identities predicts CWBI. That is, the relational by collective identity interaction predicts CWBI to a significant extent only when employee individual identity is relatively low, and among these low-individual-identity employees the negative relation between collective identity and CWBI seems to be strengthened when relational identity is low. Possibly employees' concerns with work groups' welfare (high collective identity) will motivate them to follow rules related to work relationships with colleagues in general (i.e., committing less CWBI). And the beneficial effect of collective identity on CWBI seems to become

stronger when employees do not have much concerns with their own personal interests or the goals and welfare of their specific work partners; that is, when they may have more personal resources available to regulate their interpersonal behaviors while interacting with colleagues.

From an applied standpoint, organizational practitioners may be able to predict and further prevent CWB by documenting employees' identity profiles. For example, based on our preliminary finding it seems reasonable to predict that employees with higher chronic collective identity tend to commit fewer CWBs. In addition, we may also predict that employees with high collective identity tend to commit the least CWBO regardless of the level of relational identity while those with low collective and relational identities tend to commit the most CWBO, among all employees with various collective and relational identity portfolios. Nonetheless, given the limited sample sizes of the subgroups used for the simple slope analyses, more research is warranted before we conclude about the validity of employees' identity profiles in predicting employee behaviors, including CWB.

Limitations and Conclusion

A few limitations of our current study deserve mention here. First, all data were self-reported, which may raise concerns regarding common method variance among variables and possibly underreporting of CWB (e.g., Penney and Spector 2005; Podsakoff et al. 2003). However, self-reports may be appropriate and accurate given our focal variables of perceptions of unfairness and self-identity levels (Conway and Lance 2010; Spector 2006). CWB, in particular, is best measured using self-reports because employees often perform these behaviors covertly in the absence of others (de Jonge and Peeters 2009; Fox et al. 2007). Indeed, meta-analytical evidence suggests that self-raters capture a broader content domain of CWB than other-raters, and self- and other-report CWB are generally associated with common correlates in rather similar patterns and magnitudes (Berry et al. 2012). Additionally, problems of common method variance are less worrisome in the case of our study because our hypotheses concerned interactive effects that have been shown to be resistent (Evans 1985; Siemsen et al. 2010). Given that we observed significant interactions, the nature of which corresponded to predictions, we are confident in the validity of our findings.

A second limitation is our cross-sectional design which prevents us from inferring causal relations among unfairness, self-identity, and CWB. Quasi-experimental and longitudinal designs could be used in future field research to better address the temporal dynamics among our focal variables. Doing so is important because alternative explanations are plausible (e.g., unfairness may strengthen victims' individual identities that, in turn, elicit CWB; Johnson and Lord 2010). Also, further exploration of the causal effects of unfairness and identity on CWB could extend our present understanding by measuring the mediating mechanisms proposed in this paper. We argued that having high collective and relational identities helps employees to build social capital with others, which is reciprocated in the form of support when those employees struggle with the job demands created by interpersonal unfairness. Although we did not measure proxies of social capital in this study, future research might verify that social capital is responsible for observed effects by testing a mediated moderation model in which social capital mediates the moderating effect of identity on unfairness–CWB relations.

Lastly, it is important to recognize that the present study's contributions are bound by one single employee sample from one single cultural context (China). Future research should cross-validate the relations between interpersonal unfairness, all three levels of self-identity, and CWBs among multiple employee samples from more than one cultural context. In particular, given the relevance of self-identity to the cultural value of individualism–collectivism (Markus and Kitayama 1991), it would be interesting to compare the results found in individualistic cultures (e.g., the United States or Australia) with those found in collectivistic cultures (e.g., China or Japan) by using rigorous research designs that ensure equivalence across samples and cultures.

Despite the above limitations, our study enriches the JD–R model by adding a new dispositional moderator (employee identity) between a prevalent job demand variable (interpersonal unfairness) and an important behavioral outcome (CWB). Our study also contributes to a growing literature by showing that employee identity is an important dispositional variable to consider in work settings and it is critical to investigate the potentially different roles of the three identity levels. We found that the way in which employees define themselves affects how they perceive and respond to interpersonal unfairness. Specifically, having a high relational or collective identity mitigates the positive relation of interpersonal unfairness with CWB. In addition, considering all three levels of employee identity seems to be important to directly predict the occurrence of CWBs. It is our hope that these findings help generate further insights into the antecedents of CWB and prompt further research in that direction.

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