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## Negative affectivity and workplace deviance: the moderating role of ethical climate

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# Negative affectivity and workplace deviance: the moderating role of ethical climate

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This study investigates (1) the relationship between employees' trait of negative affectivity (NA) and workplace deviance and (2) the moderating role of ethical climate in the above relationship. Data was collected from 310 employees in 40 Taiwanese companies, and hierarchical linear modeling was used to test the hypotheses. Results show that NA was positively related to workplace deviance. In addition, the rules climate weakened the relationship between NA and workplace deviance, and both the instrumental climate and the caring climate strengthened the relationship between NA and workplace deviance. Managerial implications and future research directions are also discussed.

**Keywords:** ethical climate; hierarchical linear modeling (HLM); negative affectivity; Taiwanese companies; workplace deviance

## Introduction

Previous research has demonstrated that workplace deviance, defined as 'voluntary behavior that violates significant organizational norms and ... threatens the well-being of the organization, and its members, or both' (Robinson and Bennett 1995, p. 556), is surprisingly common in organizations. Employee deviance may lead to such significant negative consequences for organizational efficacy as losses due to absenteeism, losses due to employee theft and equipment sabotage, lower productivity levels and lower organizational-performance levels (e.g. O'Leary-Kelly, Griffin and Glew 1996; Dunlop and Lee 2004). To help resolve this problem, researchers attempt to predict when, how and why employees engage in deviant behaviors.

Past research has generally found that negative affectivity (NA), which refers to the extent to which an individual experiences levels of distressing emotions, such as anger, hostility, fear and anxiety (Watson and Clark 1984), was positively related to employee deviance (e.g. Aquino, Lewis and Bradfield 1999). However, some studies did not found comparable results (e.g. Douglas and Martinko 2001; Glome and Liao 2003). The reasons behind the inconsistency of these studies may be that there exist some boundary conditions – when employee NA is and is not relevant for predicting workplace deviance. Through the adoption of the interactionist perspective, the interactive effects of individual factors (e.g. personality traits) and organizational factors (e.g. organizational climate) relative to employee deviance have attracted growing attention (Chiu and Peng 2008). Ethical climate contains norms that guide employees' behaviors and reflects the ethical

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character of a given organization (Cullen, Parboteeah and Victor 2003). When an organization develops and communicates ethical guidelines and establishes the consequences of violating organizational norms, employees in the organization are more likely to comply with organizational ethical expectations (Mulki, Jaramillo and Locander 2008). In the present study, we examine the moderating roles of three types of ethical climate (i.e. caring climate, rules climate, and instrumental climate) in the relationship between employee NA and workplace deviance.

The aim of this study is to make two-fold contributions to extant research on workplace deviance. First, past research has focused chiefly on investigating the main effects of individual factors or of situational factors. Much less research has assessed both of these perspectives simultaneously (e.g. Greenberg and Barling 1999). Scholars have argued that 'The person-situation debate in psychology has led to the relatively widespread acceptance of an interactional perspective and an accumulating body of evidence that traits are important (which by no means denies the importance of the situation)' (George 1992, p. 191). It has been well established that behavior attributable to individuals often reflects the influence of their environments' social cues (Bandura 1977). Researchers have adopted this line of interactional perspective by suggesting that workplace deviance could be well explained by a complex interaction between and among environmental and individual-difference variables (e.g. Folger and Skarlicki 1998; Martinko and Zellars 1998). A recent review paper by Lau, Au and Ho (2003) encouraged further studies to examine how the interaction between individual differences and situational factors affect employee deviance. The present study answers their call by investigating the moderating effects of the situational factors (i.e. ethical climates) on the effects of individual factors (i.e. NA).

Second, researchers have indicated that much of the work on workplace deviance has pertained predominantly to individual-level phenomena (e.g. Robinson and O'Leary-Kelly 1998; Glome and Liao 2003). In a recent review paper, Barling, Dupré and Kelloway (2009) called for papers that move beyond an individual focus and incorporate multilevel perspectives to enhance our understanding of workplace deviance. We answer their call by examining the cross-level moderation effects of ethical climate on the relationship between employee NA and deviant behaviors. We believe that a multilevel approach to assessing person (e.g. trait affectivity) and situation (e.g. ethical climate) can aid in integrating these two streams of research.

## Theory and hypotheses

### NA and workplace deviance

NA is defined as a higher order personality variable concerning the extent to which an individual generally experiences a variety of negative emotions such as anger, hostility, sadness and anxiety (Watson and Clark 1984). Workplace-deviance literature (e.g. Douglas and Martinko 2001) has found NA to be associated with deviance. There are three possible reasons behind this finding. First, individuals with high NA are highly sensitive to negative stimuli that generate negative emotions, which can signal to individuals that an event is harmful to their personal goals (Lazarus 1991), and which can strengthen the individuals' self-directed pessimism and the individuals' environment-directed pessimism. This rise in pessimism can then motivate these high-NA individuals to implement a mitigation of their felt negative emotions, which the individuals can achieve by engaging in deviance (Fox, Spector and Miles 2001). Second, high-NA individuals tend not to seek direct control of their work environments (Judge 1993). Instead, they may prefer more indirect coping strategies, such as private and covert deviance (Skarlicki,

Folger and Tesluk 1999). Third, high-NA employees are generally harder to get along with and have poorer relationships with people around them than is the case with employees who are low in NA (George 1992). Therefore, high-NA employees are more likely to have interpersonal conflict with others and in turn to engage in deviance than the low-NA employees. Past studies have generally confirmed that high-NA individuals are more likely to engage in workplace deviance than are the low-NA individuals (e.g. Aquino et al. 1999; Fox and Spector 1999; Skarlicki et al. 1999). Therefore, we propose the following hypothesis:

*Hypothesis 1*:     NA will be positively related to workplace deviance.

### The moderating effects of organizational ethical climate

Ethical climate has been defined as the shared perceptions of what ethically correct behavior is and how ethical issues should be handled (Victor and Cullen 1987), and was classified into five forms: (1) CC (employees are genuinely interested in the welfare of others within and outside of the organization); (2) RC (employees strictly follow the rules determined by their department or organization); (3) instrumental climate (employees look out for their own self-interests, often at the cost of others); (4) independence climate (employees are strongly guided by their own sense of right and wrong); and (5) law and code climate (employees are required to adhere to the codes and regulations of their profession or government). In this study, we selected caring climate, rules climate and instrumental climate as three major moderators of the relationship between employees' trait NA and workplace deviance for two reasons. First, among the five climates that were suggested by Victor and Cullen (1988), it was argued that the caring climate, rules climate and instrumental climate were the most related to workplace deviance (e.g. Wimbush, Shepard and Markham 1997; Vardi 2001). Second, scholars have argued that organizational ethical climates can be differentiated by the attributes of organizations. For example, independence climate are likely to be prevalent in newly established firms (Neubaum, Mitchell and Schminke 2004), while law and code climates may dominate the military units (Weber and Gerde 2011). As the main purpose of the present study was to examine the workplace deviance in the general private enterprises, rather than focusing on public sectors or new venture firms, we believe the three types of ethical climate (i.e. caring climate, rules climate and instrumental climate) were more relevant to our study than the other two.

Trait-activation theory (Tett and Guterman 2000), which focuses on person–situation interaction to explain behavior on the basis of responses to trait-relevant cues found in situations, can provide a theoretical foundation for discussing how the three types of ethical climates may moderate the effects of trait NA on workplace deviance. Trait activation theory asserts that 'the behavioral expression of a trait requires arousal of that trait by trait-relevant situational cues' (Tett and Guterman 2000, p. 398). A situation is said to be relevant to a trait if it provides cues for the display of trait-relevant behavior. Indeed, the ethical climates discussed in the present study may offer cues for the expression of trait NA. The strength of the relationship between trait NA and workplace deviance may depend on the how many cues the situation (i.e. ethical climate) offers for the expression of NA-relevant behavior (i.e. deviance).

We propose that the caring ethical climate and the rules ethical climate would mitigate the effects of NA on workplace deviance. In a caring climate, employees are genuinely interested in the welfare of others, both within and outside their organizations. They are

most likely to make decisions that provide the greatest benefits for the greatest number of people involved in the decisions (Cullen et al. 2003). Rules climate, in contrast, manifests organizational decisions that are guided by a set of rules or codes. Employees are expected to strictly follow their organization's rules. Rules would serve as the primary guide for employees when a decision has to be made. Thus, we expect that both caring climate and rules climate will motivate employees to be well-behaved and disciplined. As suggested by trait activation theory (Tett and Guterman 2000), these two types of ethical climate may offer few cues for the expression of unethical behaviors (e.g. workplace deviance), which in turn can weaken the relationship between employees' trait NA and the employees' deviant behaviors. Therefore, we propose the following hypotheses:

*Hypothesis 2*: The higher the caring climate within an organization, the weaker the relationship between employee trait NA and workplace deviance.

*Hypothesis 3*: The higher the rules climate within an organization, the weaker the relationship between employee trait NA and workplace deviance.

Further, in an organization with a highly instrumental climate, employees look out for their own self-interests, often to the benefit of others (e.g. Elçi and Alpkan 2008; Tsai and Huang 2008). Within an instrumental climate, the individuals' self-interest becomes the most important source for moral reasoning when they are making decisions (Victor and Cullen 1988). The needs and interests of others (within the same department or organization) are of less concern. The instrumental climate may be highly related to workplace deviance because it is based on egoistic decision making, where 'people most likely act in ways to promote their own exclusive self-interest, regardless of laws, rules, or the impact their actions have on others' (Wimbush and Shepard 1994, p. 641). Following the argument laid out in trait-activation theory (Tett and Guterman 2000), we expect that instrumental climate may offer many cues for the expression of workplace deviance, in turn strengthening the relationship between employee NA and deviant behaviors. Therefore, we propose the following hypothesis:

*Hypothesis 4*: The higher the instrumental climate within an organization, the stronger the relationship between employee trait NA and workplace deviance.

## Method

### Participants

Through the personal contacts of the third author, we chose 40 companies in Taiwan as our study's research targets. The 40 firms were from the following five industries, 6 firms in the manufacturing industry, 1 in the retail industry, 10 in the financial industry, 11 in the high-tech industry and 12 in the service industry. The employees of the same company were from different departments (i.e. had different job types). Of the 310 employees, 126 (40.6%) were male and 237 (76.5%) were single. Their mean age was 28.89 years, and the mean job tenure was 2.90 years. Most of them had a bachelor's degree (92.9%), and worked at non-managerial jobs.

### Procedure

Data was collected between November 2008 and April 2009 in Taiwan. We measured constructs with different time points to enhance the possibility of causality inference. We first obtained permission and support from the given firm's management for our

data-collection efforts. The questionnaires with stamped return envelopes were then distributed to these companies by mail or distributed personally by the third author. A cover letter that outlined the research purpose and included researchers' name and affiliation was provided. In addition, owing to the compelling assertion that perceived anonymity is vital when measuring deviant behaviors through self-reports (Bennett and Robinson 2000), all participants were guaranteed anonymity during this process in the current study. They were asked to provide only identifying information that was not recognizable by other members of their organization, and higher level management members were not present while the respondents filled out the instruments.

In time 1 (T1), 350 participants were asked to rate their own perceptions of ethical climate, NA and control variables comprising positive affectivity (PA), interpersonal justice, job satisfaction and social desirability. Three weeks later (T2), a second questionnaire was administered. On the basis of the employee questionnaires obtained in T1, 338 employees who had completed the first-wave questionnaire were asked to rate their displays of deviant behaviors. During both administrations in T1 and T2, we asked participants to provide the last five digits of their phone numbers as identification numbers. The third author coded the surveys based on participants' last five digits of their phone numbers to match the T1 responses with the appropriate T2 responses. After deleting unmatched pairs, we had a valid sample of 310 participants, which yielded a valid return rate of 88.57%.

## Measures

### Negative affectivity

We measured NA using the 10 negative affect terms (e.g. nervous, afraid and ashamed) from the Positive and Negative Affect Schedule (PANAS; Watson, Clark and Tellegen 1988). Respondents were asked to indicate the extent to which the 10 adjectives described their general feelings about their life as a whole (1 = not at all, 4 = extremely). The four-point anchors served to meet the requirement of an interval scale, in line with Tsai's (2001) argument that the property of equal distances between anchors had diminished after his translation of the original five PANAS anchors into Chinese. The Cronbach's $\alpha$ was 0.90.

### Workplace deviance

As in most deviance research (e.g. Liao and Chuang 2004; Tepper et al. 2009), the current study measured deviant behavior through self-reporting because the behavior is often performed in private. Research has suggested that the self-report method often provides a more accurate and valid assessment of deviant behaviors than other methods because respondents are likely to accurately and honestly self-report instances of deviance if they are guaranteed anonymity (Bennett and Robinson 2000). We used Bennett and Robinson's (2000) 19-item scale to measure the two dimensions of workplace deviance – interpersonal deviance and organizational deviance. Responses ranged from 1 (never) to 7 (always). Because we had developed the deviance hypotheses at the construct level in our theoretical argument (Law, Wong and Mobley 1998), and because previous research had found the two dimensions of deviance to be very highly correlated ($r = 0.86$ in Bennett and Robinson 2000; $r = 0.96$ in Lee and Allen 2002), we followed a path consistent with Lee and Allen (2002) and Judge, Scott and Ilies (2006), that is, we did not distinguish between the two dimensions and we averaged the 19 items in our analysis to form a composite score that would represent the latent construct of deviant behavior. The Cronbach's $\alpha$ for the 19-item scale was 0.85.

*Ethical climate*

We used an 18-item scale from Victor and Cullen's (1988) scale to measure the three types of ethical climate comprising seven items for the *caring* climate (e.g. 'What is best for everyone in the company is the major consideration here'), four items for the *rules* climate (e.g. 'It is very important to follow the company's rules and procedures here') and seven items for the *instrumental* climate (e.g. 'In this company, people protect their own interests above all else'). The response options ranged from 1 to 6 (1 = strongly disagree and 6 = strongly agree). The Cronbach's $\alpha$ for the three ethical climate subscales were all acceptable: 0.80 for caring climate, 0.81 for rules climate and 0.76 for instrumental climate.

We statistically justified aggregation by examining evidence of within-aggregate-organization agreement and between-organization disagreement. The mean interrater agreement values (rwg, the within-group interrater reliability statistic) for caring climate, rules climate and instrumental climate were 0.92, 0.89 and 0.89, respectively, all above the 0.60 cutoff suggested by James (1982). The ICC(l)s, which compared the between-organization sum of squares to the total sum of squares according to the results of a one-way analysis of variance, in which organizations were the independent variable, were 0.22, 0.21 and 0.16 for caring climate, rules climate and instrumental climate, respectively. The ICC(2)s, indicating interrater reliability, were 0.64, 0.63 and 0.55 for caring climate, rules climate and instrumental climate, respectively. All of these were comparable to the median or recommended ICC (the intraclass correlation) values reported in the literature (see Schneider, White and Paul 1998). We thus concluded that aggregation was justified for these variables.

*Control variables*

Past empirical research has found that gender (e.g. Tepper et al. 2009), age (e.g. Mitchell and Ambrose 2007), tenure (e.g. Thau, Crossley, Bennett and Sczesny 2007), interpersonal justice (e.g. Jones 2009) and job satisfaction (e.g. Judge et al. 2006) were related to workplace deviance. Therefore, these variables were included as control variables in this study. We adopted Colquitt's (2001) four-item scale, which measures the extent to which employees perceive their supervisor's daily engagement in specific behaviors and which uses a 5-point Likert scale (1 = *strongly disagree*; 5 = *strongly agree*); the overall purpose of the scale is to measure employees' perceptions of interpersonal justice at work. Sample items include 'Has he or she treated you in a polite manner?' and 'Has he or she treated you with dignity?' The Cronbach's $\alpha$ for this measure was 0.93. In addition, five items from Brayfield and Rothe (1951) were used to measure the degree of employee satisfaction toward his (her) job. Sample items include 'I feel fairly well satisfied with my present job' and 'Most days I am enthusiastic about my work'. The response options ranged from 1 to 5 (1 = strongly disagree and 5 = strongly agree). The Cronbach's $\alpha$ for this measure was 0.71.

In addition, although the focus of the present study was to investigate the effects of NA on deviant behaviors, PA was included as a covariate because research has found that neither PA nor NA seem to be symmetrical or parallel in influencing people's cognitions and behaviors (Isen 1999). Ten positive affect terms (e.g. excited, enthusiastic) from the PANAS (Watson et al. 1988) were used to measure this construct. Respondents were asked to indicate the extent to which the 10 adjectives described how they felt generally in their life as a whole (1 = not at all, 4 = extremely). The Cronbach's $\alpha$ for this measure was 0.90. Lastly, given the nature of the question under investigation, social desirability may undermine the likelihood of obtaining accurate reports of deviance. Thus, we followed

Greenberg and Barling's (1999) suggestion to control for social desirability. We measured the extent of respondents' endorsement of culturally sanctioned and approved items by using 13 items that derived from the short version of the Marlowe–Crowne Social Desirability Scale (Marlowe and Crowne 1964) and that had undergone development by Reynolds (1982). Sample items include 'It is sometimes hard for me to go on with my work if I am not encouraged' and 'I sometimes feel resentful when I don't get my way'. The response options ranged from 1 to 5 (1 = strongly disagree and 5 = strongly agree). The Cronbach's $\alpha$ for this measure was 0.71.

Because the original survey instrument was developed in English, the English scale was translated into Chinese and then back-translated into English by two bilingual (English–Chinese) speakers so as to ensure cross-linguistic comparability of the scale-item contents (Brislin 1980).

## Results

Table 1 shows the correlations and descriptive statistics for the study variables. As expected, we found that workplace deviance was significantly positively correlated to NA ($r = 0.59$, $p < 0.01$). Moreover, there were negative correlations between workplace deviance and three control variables: age ($r = -0.17$, $p < 0.01$), interpersonal justice ($r = -0.12$, $p < 0.05$) and PA ($r = -0.15$, $p < 0.01$).

Table 2 presents the results of the confirmatory factor analyses (CFAs) using the maximum likelihood estimation method. Chi-square difference tests indicate that the hypothesized 9-factor model (i.e. PA, NA, interpersonal justice, job satisfaction, social desirability, caring climate, rules climate, instrumental climate and deviant behavior; $\chi^2$ [2,966] = 1734.08, CFI = 1.00; GFI = 0.88; RMSEA = 0.00) provided a better fit for the data than did (1) the one-factor model ($\Delta\chi^2$ [36] = 3493.59, $p < 0.01$), (2) the 7-factor model ($\Delta\chi^2$ [15] = 344.01, $p < 0.01$) and (3) the 8-factor model ($\Delta\chi^2$ [8] = 1080.95, $p < 0.01$). These results suggest that the present study's constructs were distinct.

As there were multiple data points that were linked to the same organization, using OLS regression to test this kind of data might violate the statistical assumption of independent observations (Kenny and La Voie 1985) and result in biased estimates of the relations between variables (Dreher, Ash and Hancock 1988). Therefore, considering the nested nature of the data, we performed a series of hierarchical linear modeling (HLM) analyses to test the influence of NA on workplace deviance. Moreover, we tested the moderating effects of the three types of ethical climate by using HLM. We then followed Hoffmann, Griffin and Gavin's (2000) suggestion to investigate the between-organization variation before testing the hierarchical models. The null model results indicate that there was significant between-organization variance in employee deviant behavior ($\tau_{00} = 0.06$, $\chi^2$ [39] = 128.27, $p < 0.01$), and that 74% of the total variance in the dependent variable was within organizations (i.e. ICC [1] = 0.26). These results suggest that hierarchical modeling of these data was appropriate and that in the dependent construct scores, there was substantial within-organization variability open to potential explanation.

As seen in Table 3, we performed a series of HLM analyses to test the proposed hypotheses. In model 1, the seven control variables (i.e. gender, age, tenure, interpersonal justice, job satisfaction, social desirability and PA) and NA were entered into the level-1 model. In model 2, to mitigate the possibility of finding a spurious moderating effect, we followed Hofmann and Gavin's (1998) suggestion to include the means of all the level-1 variables, the moderating variables (i.e. caring climate (CC), rules climate (RC) and instrumental climate (IC)), and the means of the interactions between NA and the three

Table 1. Descriptive statistics and correlations.[a]

| Variables | M | SD | 1–1 | 1–2 | 1–3 | 1–4 | 1–5 | 1–6 | 1–7 | 1–8 | 1–9 | 2–1 | 2–2 | 2–3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Level 1. Individual level | | | | | | | | | | | | | | |
| 1–1. Gender[b] | – | – | (–) | | | | | | | | | | | |
| 1–2. Age | 28.89 | – | 0.09† | (–) | | | | | | | | | | |
| 1–3. Tenure | 2.90 | – | –0.05 | 0.52** | (–) | | | | | | | | | |
| 1–4. Interpersonal justice | 3.88 | 0.85 | –0.02 | –0.14* | –0.23** | (0.93) | | | | | | | | |
| 1–5. Job satisfaction | 3.14 | 0.36 | 0.00 | 0.08 | –0.05 | 0.11* | (0.70) | | | | | | | |
| 1–6. Social desirability | 3.11 | 0.40 | 0.07 | –0.15** | –0.02 | 0.18** | 0.13* | (0.71) | | | | | | |
| 1–7. Positive affectivity | 2.69 | 0.51 | 0.18** | 0.10† | 0.01 | 0.14* | 0.13* | 0.11† | (0.90) | | | | | |
| 1–8. Negative affectivity | 1.77 | 0.47 | –0.03 | –0.07 | –0.02 | 0.01 | 0.13* | 0.15** | –0.05 | (0.85) | | | | |
| 1–9. Deviant behavior | 1.58 | 0.46 | 0.10† | –0.17** | 0.01 | –0.12* | –0.04 | 0.11† | –0.15** | 0.59** | (0.84) | | | |
| Level 2. Organization level | | | | | | | | | | | | | | |
| 2–1. Caring climate | 3.54 | 0.61 | | | | | | | | | | (0.80) | | |
| 2–2. Rules climate | 3.81 | 0.71 | | | | | | | | | | 0.45** | (0.81) | |
| 2–3. Instrumental climate | 3.15 | 0.64 | | | | | | | | | | –0.23** | –0.02 | (0.76) |

†$p < 0.10$; *$p < 0.05$; **$p < 0.01$.
[a]Values in parentheses are Cronbach's α's.
[b]Coded as male, 1; female, 0.

Table 2. Results of confirmatory factor analysis of study variables.

| Model | $\chi^2$ | df | CFI | GFI | RMSEA |
|---|---|---|---|---|---|
| One-factor model[a] | 5227.67 | 3002 | 0.98 | 0.70 | 0.05 |
| Seven-factor model[b] | 2078.09 | 2981 | 1.00 | 0.85 | 0.00 |
| Eight-factor model[c] | 2815.03 | 2974 | 1.00 | 0.81 | 0.00 |
| Hypothesized nine-factor model | 1734.08 | 2966 | 1.00 | 0.88 | 0.00 |

[a] All nine constructs are combined.
[b] The three ethical climate dimensions are combined.
[c] Both PA and NA are combined.

types of ethical climate (i.e. NA × CC, NA × RC and NA × IC) as the level-2 control variables. In model 3, the slope estimates obtained from the previous models were used to test the cross-level interaction effects among NA with the three types of ethical climate.

Table 3. Hierarchical linear modeling results for employee deviance.

| | | Deviant behavior | | |
|---|---|---|---|---|
| Variables | Null model | Model-1 | Model-2 | Model-3 |
| **Level 1** | | | | |
| Intercept | 1.59** | 1.61** | .60** | 1.60** |
| Gender | | 0.12** | 0.09* | 0.10** |
| Age | | $-0.02$* | $-0.01^\dagger$ | $0.01^\dagger$ |
| Tenure | | 0.01 | 0.00 | 0.01 |
| Interpersonal justice | | $-0.02$ | $-0.02$ | 0.02 |
| Job satisfaction | | $-0.06$ | $-0.07$ | $0.08^\dagger$ |
| Social desirability | | 0.08* | 0.07 | 0.06* |
| Positive affectivity | | $-0.01$ | $-0.02$ | 0.03 |
| Negative affectivity (NA) | | 0.57** | 0.58** | 0.59** |
| **Level 2** | | | | |
| Mean gender | | | 0.21 | 0.18 |
| Mean age | | | $-0.01$ | $-0.03$* |
| Mean tenure | | | $-0.01$ | $-0.00$ |
| Mean interpersonal justice | | | $-0.16$ | $-0.11$ |
| Mean job satisfaction | | | $-0.05$ | $-0.28$ |
| Mean social desirability | | | $-0.22$ | $-0.45$* |
| Mean positive affectivity | | | $-0.23$ | $-0.03$ |
| Mean NA | | | 0.49* | $-0.85$ |
| Caring climate (CC) | | | 0.07 | $-1.65^\dagger$ |
| Rules climate (RC) | | | $-0.05$ | 2.09* |
| Instrumental climate (IC) | | | 0.22 | $-1.17$ |
| Mean NA × CC | | | | $0.99^\dagger$ |
| Mean NA × RC | | | | $-1.22$** |
| Mean NA × IC | | | | 0.81 |
| **Cross-level interactions** | | | | |
| NA × CC | | | | 0.42* |
| NA × RC | | | | $-0.19^\dagger$ |
| NA × IC | | | | 0.28* |
| Between-organization variance | 0.057 | 0.073 | 0.066 | 0.073 |
| Within-organization variance | 0.162 | 0.064 | 0.066 | 0.066 |

Notes: Employee $n = 310$, organization $n = 40$. Entries are estimations of the fixed effects with robust standard errors. $\dagger p < 0.10$; $*p < 0.05$; $**p < 0.01$.

Furthermore, to ensure meaningful interpretations of the parameter estimation and to refrain from specific organization effects, we group-centered level-1 predictor variables and grand-centered level-2 predictor variables before testing hierarchical linear models (Hofmann and Gavin 1998).

As reported in Table 2, NA ($\gamma = 0.57$, $p < 0.01$) had a significant relationship with deviant behavior. Therefore, Hypothesis 1 was supported. In addition, employee gender ($\gamma = 0.11$, $p < 0.01$), age ($\gamma = -0.01$, $p < 0.05$) and social desirability ($\gamma = 0.08$, $p < 0.05$) were all significantly related to workplace deviance. Moreover, the cross-level interactions were examined and the results show that the interactions of NA × CC ($\gamma = 0.42, p < 0.05$), NA × RC ($\gamma = -0.19, p < 0.10$) and NA × IC ($\gamma = 0.28, p < 0.05$) were significant. To clarify the forms of moderating effects, we used HLM to draw the interaction effect plots and conducted simple slope analysis (Aiken and West 1991). As shown in Figure 1, when a climate was relatively caring, NA was positively related to workplace deviance (simple slope $= 1.80$, $p < 0.05$). In contrast, when a climate was relatively uncaring, the relationship was strengthened (simple slope $= 2.72, p < 0.05$). The pattern of moderation did not confirm the expected shape of the hypothesized interaction. Thus, Hypothesis 2 was not supported. Figure 2 shows that the positive relationship between NA and workplace deviance was weaker when rules climate was high. Thus, Hypothesis 3 was supported. Figure 3 shows that when a climate was relatively non-instrumental, NA was positively related to workplace deviance (simple slope $= 1.30$, $p < 0.05$). In contrast, when a climate was relatively instrumental, the relationship was strengthened (simple slope $= 1.66$, $p < 0.05$). Thus, Hypothesis 4 was supported.

## Discussion

One purpose of the current study has been to examine the effect of trait NA on workplace deviance. Consistent with previous studies (e.g. Watson and Clark 1984; Aquino et al. 1999; Dalal 2005; Penny and Spector 2005), we found that high-NA individuals tended to engage in deviant behaviors. Scholars have argued that many workplace-deviance models
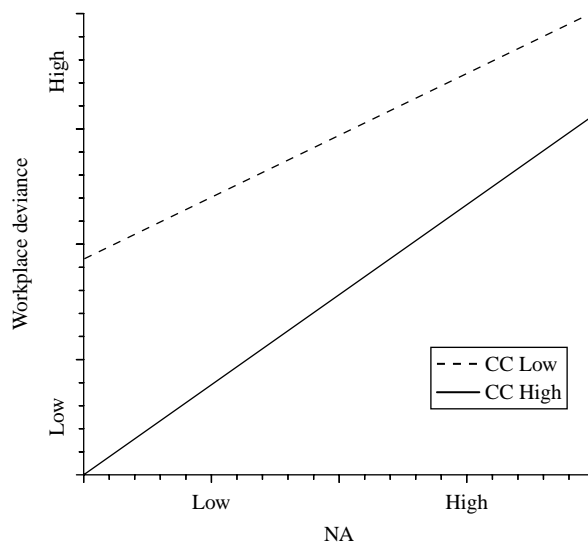


Figure 1. Effect of interaction between NA and caring climate (CC) on workplace deviance.
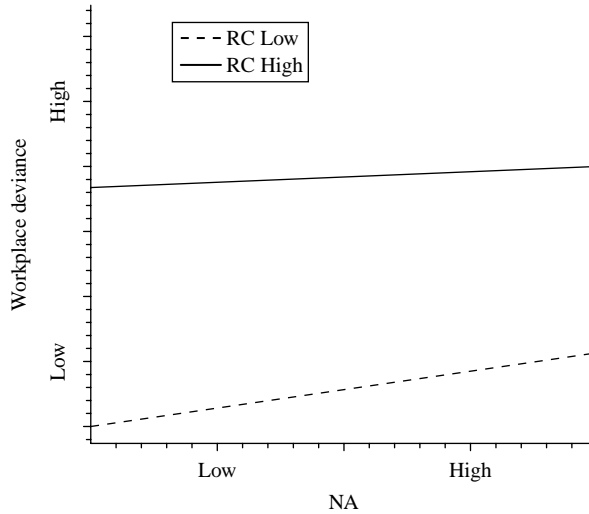
Figure 2.    Effect of interaction between NA and rules climate (RC) on workplace deviance.

have rested predominantly on assumptions of rationality and have focused predominantly on the cognitive processes in which these behaviors take place (e.g. Aquino et al. 1999). The present study suggests that employee affect (i.e. NA) may trigger workplace deviance in addition to the appraisals and attributions posited by traditional cognitive models. Practitioners could decrease the likelihood of workplace deviance by screening job candidates with respect to trait NA. In addition, we found that trait PA did not predict workplace deviance (see Table 2, model 1), a finding that was consistent with past scholars' argument that the effects of both PA and NA on judgment and behavior seem not to be symmetrical or parallel (Isen 1999). Our results were also consistent with Barsade, Ward, Turner and Sonnenfeld's (2000) argument that trait NA was more related than trait PA to internalized states such as stress reaction and aggression.
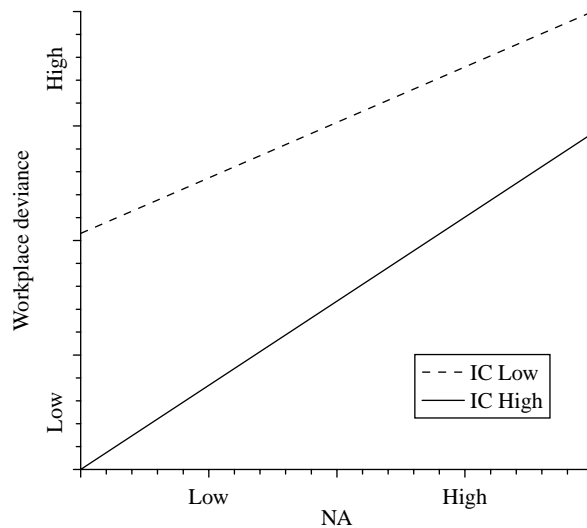


Figure 3.    Effect of interaction between NA and instrumental climate (IC) on workplace deviance.

The second purpose of this study was to extend trait-activation theory (Tett and Guterman 2000) by examining the boundary conditions associated with the effects of trait NA on workplace deviance, that is, by examining when the effects hold and when they do not. Spector, Fox and Domagalski (2006) have noted that 'individual differences do not necessarily independently explain acts of workplace violence or aggression but instead require theoretical frameworks to model the joint effects of situational factors and individual differences in order to understand counterproductive work behavior' (p. 38). It was also suggested that incorporating potential moderators is a good way to extend existing theory (Van de Ven 1989). Whetten (1989) emphasized the importance of examining 'qualitative changes in the boundaries of a theory (applications under qualitatively different conditions)' (p. 493). Researchers have suggested that predicting employee deviance is a complex process, as 'many people who fit a violent profile may not actually behave violently at work' (Greenberg and Barling 1999, p. 899). A more complete understanding of complex human behavior demands consideration of person-by-situation interactions (Mischel 1968). By adopting the person–environment interactive perspective, researchers call for further research on the effects of interactions between individual-difference factors and situational factors on workplace deviance (e.g. Douglas and Martinko 2001). Although past research has generally supported the assertion that direct relationships exist between deviant behavior and specific-individual-level predictors, these variables typically explain relatively little variance (Robinson and Greenberg 1998). Our findings suggest that individual-level variables are likely to affect workplace deviance directly and indirectly by interacting with situational variables. Taking both situational perceptions and personal characteristics into consideration could offer us a fuller understanding of workplace deviance (Sackett and Devore 2001).

We found that: (1) the stronger the rules climate, the weaker the positive relationship between NA and workplace deviance; and (2) the stronger the instrumental climate, the stronger the positive relationship between NA and workplace deviance. These findings suggest that researchers may enhance the predictive value of NA by taking into account aspects of the given situation. To keep the employees with high NA from engaging in workplace deviance, practitioners should establish and promote appropriate rules, codes and procedures to be followed by employees (i.e. rules climate), or should include ethical codes diminishing self-centered concerns (i.e. instrumental climate) to prevent the development of an instrumental climate (Elçi and Alpkan 2008).

Unexpectedly, the results show that the stronger the caring climate, the stronger the positive relationship between NA and workplace deviance. Past research has suggested that caring ethical climates can motivate employees to cooperate with each other, enhance positive feelings employees have about their tasks and strengthen the likelihood that employees will have high-level perceptions of organizational support (Cullen et al. 2003). Therefore, employees within a highly caring climate would likely perceive that they can coordinate work activities with other employees, perform their jobs in their own ways and decide the order and pace of carrying out tasks at work. This situation is similar to weak situations, in which there are rather few demands or pressures to induce conformity (Mischel 1977). It has been suggested that in contrast with strong situations, in which there are considerable demands or pressures with which to comply, individuals in weak situations can rely on their personality traits to guide their behaviors to a greater extent. As we see the matter, it is possible that employees within a highly caring climate may perceive that they are highly supported and have considerable discretion in determining which behaviors to undertake (i.e. weak situations). Thus, employees' trait NA will be more likely to influence the displays of workplace deviance than would otherwise be the case.

Another issue worth discussing is our finding that none of the three ethical climates could predict employees' workplace deviance (cf. Table 3, model 2). However, findings of Vardi (2001) concerning the main effects of ethical climates on organizational misbehavior (a construct similar to workplace deviance) appear to be somewhat consistent with those of the present study. His research strategy was similar to that of the present study insofar as real business employees were invited to self-rate their perceptions of organizational ethical climate and deviant behaviors in a field setting. In line with our results, he found that both the effects of caring climate and the effects of instrumental climate were non-significant. However, he found rules climate to be positively related to organizational misbehavior, a finding that seems inconsistent with the present study's. One plausible reason for the contradictory findings concerns the construct level of rules climate. Whereas Vardi (2001) focused on employees' 'own' perceptions of rules climate, the present study focused on 'overall' organizational rules climate. Because organizational climates may influence employees' behaviors indirectly by influencing the employees' perceptions, we expect that the construct of organizational rule climate is more distal than that of employee perceptions of rules climate, thereby making the effects of organizational rule climate weaker than those of *employee perceptions* of rules climate.

The existing research on work affect or workplace deviance has rested predominantly on samples from individualist-culture countries (e.g. countries in North America and Europe) and has harnessed relatively small amounts of data from countries with collectivist cultures (e.g. Taiwan) (e.g. Chiu and Peng 2008; Hung, Chi and Lu 2009). Because our research findings are consistent with those of western studies on the relationship between NA and employee deviance (e.g. Aquino et al. 1999; Fox and Spector 1999; Skarlicki et al. 1999; Douglas and Martinko 2001), the present study may contribute to the field by using the data from Taiwan to validate the generalizability of North American findings in relation to East Asian findings. We believe that our focus on a Taiwan sample will complement extant research because we provide data on the antecedents and the boundaries of the effects of affective traits on workplace deviance in a relatively underexplored region outside of North America and Europe (Hershcovis et al. 2007). It is imperative that scholars explore the transportability of western managerial theories and practices to other cultural contexts. Consistency between East-based findings and West-based findings could form the basis for a common framework for practitioners in joint ventures to manage people with diverse cultural backgrounds.

## Limitations and directions for future research

Given the above-mentioned theoretical and practical implications, this study is not without its limitations. First, we adopted a self-report measure of workplace deviance, which may raise a concern regarding inaccurate reports due to the sensitive nature of this variable. However, scholars have argued that it is unclear whether either observers or organizational records could provide more accurate data than respondents themselves, given that many instances of employee deviance go unreported and unseen (e.g. Aquino et al. 1999). Fox and Spector (1999) further argued that these hard criterion data 'can represent only those counterproductive behaviors in which the employee has been caught, which probably represent a small subset of those behaviors of which the employee is aware and may report' (p. 928). Meta-analyses have shown that self-reported criteria are even of higher validity than other reports of deviance (e.g. Ones, Viswesvaran and Schmidt 1993). Additionally, we took statistical precautions by controlling for social desirability. If participants really underreported their deviant behavior, the effect of such a restriction

on range would be that the observed relationships would be smaller than what would have been observed under a full range of responses (Lee 1993). Thus, given that we found significant relations, including two-way interactions, it is not obvious that participants underreported deviant behaviors. We believe that when participants are assured of anonymity, self-reporting might be a valid way of assessing workplace deviant behaviors.

Second, we measured all variables on the basis of employees' self-reports, indicating that common method variance (CMV) may have inflated the proposed model's reported relationships (Podsakoff, Mackenzie, Lee and Podsakoff 2003). However, if CMV was a serious problem in this study, the pattern of relationships between these self-rated variables, which included some absences of relationship, would be unlikely (Spector 2006). In addition, although research indicates that CMV may not pose a significant bias problem (Spector 2006), an effort was made to measure these variables at different time points, which could reduce the bias effects associated with CMV. Further, given the CFA, as seen in the results section, it seems reasonable to conclude that our measures of all variables are likely assessing separate constructs. Therefore, we believe that CMV may not be a serious problem to the validity of the findings.

In conclusion, by collecting data with a longitudinal design in a real field setting, the present study found that ethical climates could moderate the relationship between trait NA and workplace deviance. This study extends prior research on the relationship between affective trait and workplace deviance by investigating the boundary conditions of the above relationship, that is, by investigating when employee NA can – and cannot – predict workplace deviance.

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